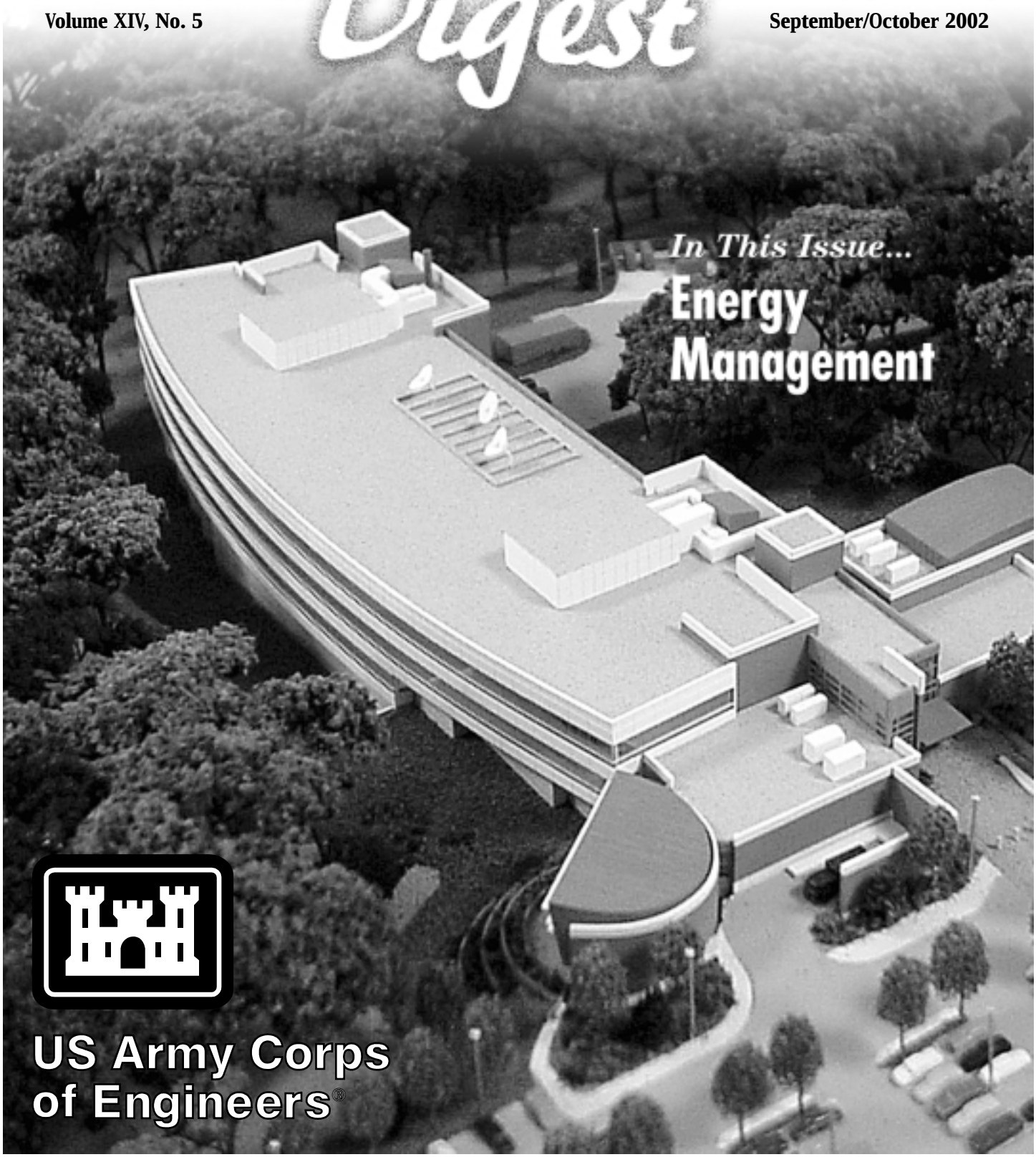
*A publication of the Directorate of Military Programs*

# Public Works Digest

**Volume XIV, No. 5** **September/October 2002**



*In This Issue...*

## Energy Management

US Army Corps of Engineers®

**Public Works Digest**

*September/October 2002*
*Vol XIV, No.5*

**US Army Corps of Engineers®**

***Public Works Digest*** is an unofficial publication of the US Army Corps of Engineers, Directorate of Military Programs, Installation Support Division, under AR 25-30, The Army Publishing Program, and AR 360-1, The Army Public Affairs Program. Method of reproduction: photo-offset; press run: 3,000; estimated readership: 40,000. Editorial views and opinions expressed are not necessarily those of the Department of the Army.

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*Cover photo:*
*National Ground Intelligence Center, Charlottesville, VA, winner of Chief of Engineers Award for Excellence in Design*

*Printed on Recycled paper.*

# LETTER FROM THE EDITOR

*In the month of September, we pay homage to the courage and heroism of those who were directly involved in coping with the terrorism of last year. We also recognize and honor the people who organized our country's fantastic institutional response.*

*As the west side of the Pentagon was being rebuilt at record speed, the workers were undaunted, indeed, egged on, by the one-year deadline. Now as I pass by the Pentagon on my way to work in the morning, I am constantly reminded of how we must be prepared at all times. I have developed a newfound appreciation for the safety measures built into the Pentagon that saved so many lives.*

*At a recent event sponsored by the Senior Executives Association honoring civil service employees killed or injured by the terrorist attacks, Steve Browning, Director of Military and Technical Services for the U.S. Army Corps of Engineers South Pacific Division, said that teamwork helped federal employees respond to last year's terrorist attacks. Browning spent weeks helping with the cleanup at Ground Zero in New York, often working 16 hours a day. "We were confronted with unprecedented problems, but the typical response— we need to study it, we need a committee— none of this happened," Browning said. "Hope was the only method we had there. We depended on the incredible selflessness of public servants to help us do this."*

*The White House Commission on the National Moment of Remembrance has suggested simple ways to remember September 11 like displaying an American flag, lighting a candle, ringing a bell or donating to a favorite charity. For each of us, that remembrance will be different and, for the most part, private.*

*By the time you receive this Public Works Digest, the one-year anniversary of September 11, 2001, will have come and gone. In the year since foreign terrorists took more than 3,000 lives, many millions more were changed forever. Unfortunately, rebuilding the shattered lives of those left behind or those who unknowingly changed plans in life-saving ways will take more than a year. There is and always will be a disconnect between those who actually experienced the terrorist attacks firsthand and those who experienced them via electronics.*

*We are not the same people we were a year ago and we never will be again. Nevertheless, the experience, as horrific as it was, has taught us to lean on one another, to better cope with tragedy and to share our grief as a Nation. In reconstruction, there is always hope, hope for a better tomorrow, a better future.*

*This issue of the Digest is dedicated to those who lost their lives on that infamous Tuesday morning in 2001. It contains articles on the Secretary of the Army energy awards, the Chief of Engineers design awards, some amazing installation successes with energy management and the 2002 CP18 Workshop. Also, be sure to read about ACSIM's John Nerger, winner of the Federal Energy and Water Management Award for Exceptional Service, in the Who's Who section.*

*Until next time…*

*Alexandra K. Stakhiv*

*Editor, Public Works Digest* PWD

# 24th Annual Secretary of the Army Energy and Water Management Awards ceremony held at Pentagon

On August 7, 2002, the auditorium of the 5th floor of the Pentagon was crowded with the winners, families, co-workers and other interested personnel who had come for the 24th Annual Secretary of the Army Energy and Water Management Awards ceremony.

In her introductory remarks, Janet Menig, Deputy Assistant Chief of Staff for Installation Management, called the winners "problem solvers and visionaries" and said that no transformation would be possible without them. "Who wants to save money and reduce cost?" she asked. "Everyone!" came the shouted response.

"With an energy bill of about $1 billion a year, we must reduce our dependence on foreign energy," she continued. Addressing the winners, she said the Army was very proud of their contributions to energy conservation.

Dr. Mario Fiori, Assistant Secretary of the Army (Installations and Environment), praised the winners for making "a serious contribution" with their energy conservation. "Energy is one of the ways to save the environment **and** money and we are meeting national goals and leading the way," he said proudly.

"The Department of Energy has its own energy winners of which the Army received an amazing 13 awards with another 18 going to the other services. Seven of today's winners are DOE winners too!" he concluded.

Keynote Speaker Hon. Thomas E. White, Secretary of the Army, praised the Army for putting "vision into practice," calling the winners "the strongest champions" for transforming installation management. "We are here to recognize excellence in an important area of energy and water management," he said. "We must all use energy wisely and conserve whenever practicable."

Giving examples, Secretary White praised Fort Lewis for teaming with Tacoma Power in 2001 to reduce overall electrical use on the installation. "Renewable energy has a growing role," he said, "and we need innovations like this across the Army." He also cited USAREUR as the first to achieve a 35 percent reduction in energy use. "All the winners combined saved the Army $7.3 million," he concluded.

To much applause, Secretary White recognized each of the following installations and personnel for their outstanding achievements in energy and water management. "Their initiatives and innovative approaches demonstrate the highest standards of energy stewardship in keeping with the Army's vision," he said.

### United States Army Reserves Headquarters, Fort McCoy

Comparing FY01 with the base year of FY85, the Directorate of Support Services at Fort McCoy achieved a 45 percent reduction in their energy usage per square foot. The Directorate upgraded facilities with complete building renovations that included ceiling, wall, and floor insulation, where needed, energy efficient double-pane windows, T-8 lighting with electronic ballasts, and set-back thermostats in full time use facilities.
*Accepting the award: COL Michael R. Staszak, Mr. John Ryder*

### United States Army Reserves 88th Reserve Support Command

The 88th's Energy Team implemented many projects ranging in complexity from simple projects such as installing timers on light switches to the installation of HVAC Direct Digital Control systems. The Command is on the leading edge of incorporating proven commercial technology into Army Reserve facilities. Their policy of using high efficiency pulse combustion boilers has produced a 35 percent reduction in natural gas consumption, in installed locations.
*Accepting the award: Mr. William H. Peterson, Mr. Barnard Kemter*

### Army National Guard Washington Army National Guard

In 1991, the Washington Army National Guard implemented a long-range program to reduce energy consumption and costs through a series of energy conservation measures. These measures include installation of energy management systems, re-light programs, new and more efficient boilers at existing facilities, and intelligent new construction that includes these measures as normal practice.

In fiscal year 2001, the savings in avoided energy costs exceeded $1,334,000. ➤

*Winners of this year's Secretary of the Army Energy and Water Management Awards.*

*(continued from previous page)*

Over the 10-year life of the program, the avoided energy costs exceed $6 million, and avoided energy use exceeds 7 million BTUs.
*Accepting the award: Mr. John Havens*

### Army National Guard
### Arizona National Guard

The Arizona National Guard's successful energy projects included statewide partnerships with the tenants of all AZARNG facilities, various utility companies, contractors and other state and federal agencies. The energy manager received special funding and resources to complete this phase of the BACnet Smart Buildings Project, using in-house labor – trained by Mr. Jeff Seaton. Simple paybacks on investments averaged about four years. As the result of this Smart Building technology, total avoided costs for FY 2001 combined with savings from previous energy conservation measures are over $178,000 – reducing energy consumption by over 2 million kilowatt hours. A significant increase in customer satisfaction was realized from precise control of major building systems.
*Accepting the award: Mr. Jeffrey Seaton, Mr. Michael Virgin*

### Outstanding Contribution
### U. S. Army Training and Doctrine Command, Deputy Chief of Staff for Engineering

The US Army Training and Doctrine Command was recognized for achievements in their Energy Management Program. TRADOC has long been a leader in the Army's energy conservation program, highlighted by meeting HQDA-assigned goals for 14 consecutive years. These efforts resulted in an energy cost avoidance in FY 2001 of $31.5 million as compared to FY85. Much of this success is due to aggressively competing to secure energy project funding (FEMP, ECIP and Utilities Modernization). Incentives to encourage utilization of private sector financing have also been instrumental, with over $82 million in Energy Savings Performance Contracts and UESC awards over the last five years.
*Accepting the award: Mr. Bill Dancy, Mr. Blaney Hill*

### Outstanding Contribution
### U. S. Army, Europe, Deputy Chief of Staff for Engineering

US Army Europe is recognized for their achievements in their Energy Management Program. From 1985 through fiscal year 2001, USAREUR realized a $248 million utility cost avoidance due to energy efficiency improvements and aggressive re-negotiations of electricity and district heat contracts. Fiscal year 2001 utility energy consumption was down 4.7 percent from fiscal year 2000 levels and down 37 percent from fiscal year 1985 levels, both on an energy per unit area basis. In addition to the many improvements made during the 1985 through 2000 timeframe, USAREUR continues to reduce consumption by energy efficient facility improvements executed through its Energy Savings Performance Contracting and Utilities Privatization programs.
*Accepting the award: Mr. James Paton, Mr. Zwetan Gentscheff*

### Active Installation, Alternate Financing
### U. S. Army Aberdeen Proving Ground

The U.S. Army, Aberdeen Proving Ground (APG) managed nine energy saving projects in FY01 with a combined annual savings of $1.74M. These projects avoided the use of 173,800 million Btus of facilities energy. Despite the increased activity, weather and construction of the Chemical Demilitarization Facility at the Edgewood Area of APG, APG had a decrease in actual consumption of 20,929 MBtus. APG has had over 30 percent growth in facilities square feet from the 1985 base line. APG has reduced its energy use from 205 MBtus/Ksf in FY85 to 153.6 MBtus/Ksf in FY2001. This aggressive reduction avoided over $7.5 million in energy costs for FY2001 and over $54 million since 1985. APG has obtained a 25 percent reduction in energy use from the 1985 base line with eight more years to reach the 35 percent reduction goal set by Executive Order 13123.
*Accepting the award: COL Mardi Mark, Mr. Harry Greveris, Mr. Gerald Carrick, Mr. Paul Wilson, Mr. James Kirk, Mrs. Marlin Spence, Mr. Joey Dean Lundy, Mr. Gary Testerman*

### Active Installation, Renewable Energy
### 25th Infantry Division (L) and U.S. Army, Hawaii

Through the partnership of the Department of Defense and Hawaiian Electric Company Executive Committee, USAG-HI DPW embarked on a new approach for saving energy and increased public energy awareness. By partnering with Hawaiian Electric Company and the Navy, DPW has utilized the Navy's Utility Energy Service Contract to expeditiously install 600 tons of central cooling for eight barracks buildings and initiate the nation's largest solar water heating project. These projects resulted in an annual energy savings of 14,965 MBtus, annual cost savings of $394,939 and utility demand side management rebates of $610,650.
*Accepting the award: LTC (P) Floyd A. Quintana, Mr. Keith Yamanaka, Mr. Stanley Reyes, Mr. Steve Luckett*

### Active Installations, Program Effectiveness
### U. S. Army Transportation Center and Fort Eustis

In FY2001, Fort Eustis saved over $1,982,776 dollars. The installation completed its Central Energy Plant Modernization (CEPM) project and executed its annual peak electrical demand and fuel management programs. Based on these actions, Fort Eustis reduced its normalized energy consumption and cost of natural gas/fuel oil by 81,638 MBtus (440,845 ccf/270,773 gallons) and $670,776, respectively.
*Accepting the award: COL Douglas E. Earle, LTC James E. Brooks, Mr. Thomas D. Jennings, Mr. Daniel B. Wood, Ms. Angela Peyton*

### Active Installations, Program Effectiveness
### U. S. Army Garrison and Fort Buchanan

The mission of the Fort Buchanan Energy Program is to reduce ➤

*(continued from previous page)*

*Barnard Kemter and Dr. Mehdi Ghaderi discuss their awards.*

energy / water consumption and cost by advancing and promoting energy efficiency and water conservation. Through FY 2001, this mission was performed by creating partnerships, leveraging resources and providing training and technical guidance in the Fort Buchanan military and civilian communities. The Command's main goal is to achieve the requirements set forth in the Energy Policy Act of 1992 and Executive Order 13123 (June 1999).
*Accepting the award: COL Edward C. Short, Mr. Jesus Gimenez*

### Active Installations, Program Effectiveness
### Dugway Proving Ground, Utah

In 2001, Dugway Proving Ground reduced its energy consumption 2 percent over the previous year, from 309,000 MBtus to 303,000 MBtus. This continues a trend of energy reduction started in 1998. Compared with the base year of 1985, DPG's 2001 consumption has been reduced 25 percent, from 404,000 MBtUs to 303,000 MBtus and energy costs by over $86,350. Compared with the consumption of the base year 1985, when 211.6 KBtus / SF were measured, the overall reduction of energy consumption in 2001 was nearly 50 percent.
*Accepting the award: Mr. John Robert Craig, Mr. Morgan Benson*

### Active Installations, Energy Management
### United States Military Academy

USMA is utilizing the Army Corps of Engineers 46 State Regional ESPC Contract as well as its own ESPC contract administered through the Army Corps of Engineers. The eight completed ESPC projects through FY2001 deliver 41,233 MBtus in energy savings annually. These projects are guaranteed to produce $995,000 in energy and operation and maintenance savings per year.
*Accepting the award: Mr. Donald Maccaud*

### Active Installations, Energy Management
### I Corps and Fort Lewis

In FY 01, Fort Lewis reduced its fossil fuel use by 5% or 79,749 MBtus and avoided $587K in energy costs. Fort Lewis implemented some extraordinary measures on its own and in partnership with the local electric utility (Tacoma Power), US Department of Energy, and Army Air Force Exchange Service (AAFES) to reduce overall electric demand. The installation was able to quickly implement strategic energy conservation and demand reduction measures while sustaining a command level interest in energy conservation initiatives. Energy reduction strategies included installing compact fluorescent light bulbs (CFLs) in family housing units, providing for energy conservation as part of the Command Inspection program, developing a team to oversee the efficient use of existing HVAC equipment and providing on-going energy awareness training for troop personnel.
*Accepting the award: COL Luke S. Green, Mr. Charles Howell, Mr. Juan M. Marin*

### Active Installations, Energy Management
### 6th Area Support Group

In FY01, the U.S. Army Europe's 6th Area Support Group (ASG) continued to build on its successful energy program through the implementation of numerous energy and water management projects, energy audits, and an active energy awareness program. In FY01, the 6th ASG invested and implemented $2,400,000 in energy conservation projects. As a result of these projects and command-wide intensive energy and environmental management, the 6th ASG realized a 6.5% reduction in utility consumption costs in FY01 compared to the previous year, for a total cost-avoidance of $830,000.
*Accepting the award: LTC Josef R. Hallatschek, Dr. Medhi Ghaderi* **PWD**

*Long-time energy managers ACSIM's John Krajewski, LIA's Grant Keith, and ACSIM's Satish Sharma and Dave Purcell were on hand for the award presentations.*

# Army 2002 Federal Energy and Water Management Award winners announced

Each year the Federal Interagency Committee and the Department of Energy present the Federal Energy and Water Management Award to recognize outstanding contributions toward increased energy efficiency, renewable energy and water conservation within the federal sector.

This is the premier energy award presented to individuals, small groups and organizations within federal agencies. It is designed to draw attention to our federal energy and water conservation efforts, as mandated by the Energy Policy Act of 1992 and Executive Orders.

The following 13 U.S. Army nominations were selected, 7 more than last year, to receive a 2002 Federal Energy and Water Management award at a ceremony to be held on October 23, 2002 in Washington, DC.

### Energy Efficiency / Energy Management

*Jeff Seaton*, Energy Manager
Phoenix, AZ

*Daniel B. Wood*, Chief, Utilities Branch, DPW
Fort Eustis, VA

*Robert Ackley*
*Dieter Haertel*
*Paul Lindemer*
415th Base Support Battalion, Unit 23152, Germany

*Fort Lewis*
*Charles A. Howell*, Energy Coordinator
Fort Lewis, WA

*U.S. Army, AMC, Aberdeen Proving Ground*
*Gary R. Testerman Sr.*, Energy Manager
Aberdeen Proving Ground, MD

### Alternative Financing

*Gary R. Testerman*, Energy Manager
Aberdeen Proving Ground, MD

*Keith Yamanaka*, Energy Manager
Schofield Barracks, HI

### Renewable Energy

*U.S. Army Intelligence Center & Fort Huachuca*
*Bill Stein*, Energy Coordinator & Utilities Sales Officer
Fort Huachuca, AZ

### Mobility / Energy Efficiency

*Hugh Jones*, Program Analyst
Center for Army Analysis, Resource Analysis Division
Fort Belvoir, VA

### Water Management

*Donald Lee J. Laurent*, Energy Program Manager
Fort Polk, LA

### Exceptional Service

*John B. Nerger*, Director, Facilities and Housing, ACSIM
Washington, DC

### Program Implementation and Management

*MAJ Tim Walker*
*Emory Lehman*
*John Gadley*
*John Havens, Jr.*
Washington Army National Guard Energy Team
Camp Murray, WA

*National Cancer Institute/U.S. Army Garrison at Fort Detrick*
*Dennis Dougherty*, Manager, Research Contracts
Fort Detrick, MD

PWD

*Jeff Seaton*


*Daniel B. Wood*


*Charles Howell*


*Gary Testerman*


*Keith Yamanaka*


*Bill Stein*


*Hugh Jones*

# Chief of Engineers Design and Environmental Awards Program

*by Frank Norcross*

The Chief of Engineers Design and Environmental Awards Program was juried on 27-28 February 2002. Participants in the award winning projects received plaques, and brochures showing the program winners were recently distributed to USACE activities.

Facilitating this program, the Information Technology Laboratory (ITL) at Engineering Research and Development Center (ERDC), Vicksburg, Mississippi, developed the Chief of Engineers awards web site and produce this year's brochure and CD ROM. ERDC-ITL.

ITL also developed the professional awards web site, worked out the bugs in both sites, helped submitters enter their information, supported the Design and Environmental Juries, announced the winners on the web sites, and prepared the brochure.

You can review all the winning submittals at: **http://ceawards.wes.army.mil/** Here are the three Military Programs winners:

### Chief of Engineers Award of Excellence

***National Ground Intelligence Center, Charlottesville, Virginia***

Design Agency: U.S. Army Engineer District, Norfolk

Design Firm: RTKL Associates, Baltimore, Maryland

Client: U.S. Army Intelligence and Security Command, Fort Belvoir, Virginia

***Jury comments***: From site planning to the smallest detail, the design concept holds true. This building creates a work environment that will leverage productivity and facilitate retention of a professional and innovative staff. It illustrates excellent indirect lighting design. Designers have taken a complex site and minimized earth moving and site disturbance to integrate the outdoors with the interior environment. The color pallet creates movement within the facility without overpowering the design integration with the outdoor environment.

### Special Recognition Award

***Zussman Mounted Urban Combat Training Site, Fort Knox, Kentucky***

Design Agency: U.S. Army Engineer District, Louisville

Design Firm: Polyengineering, Inc., Dothan, Alabama

Client: U.S. Armor Center and Fort Knox, Fort Knox, Kentucky

***Jury comments:*** This project has a unique program. It was designed to integrate design and architecture with multimedia to successfully emulate a real-war environment. This is the first year this award has been given, and this was by far the most innovative project submitted.

### Merit Award – Landscape Architecture and Lighting

***Guest House, Fort Buchanan, Bayamon, Puerto Rico***

Design Agency: U.S. Army Engineer District, Jacksonville

Design Firms: Wolfberg/Alvarez & Partners, Miami, Florida, and Edward J. Cass & Associates, San Diego, California

Client: U.S. Army Community and Family Support Center, Alexandria, Virginia

***Jury comments:*** The presence of the building on the site expresses its regionality. The landscape is integrated with the architecture. The designers took what would have otherwise been an institutional project and created a welcoming environment. The handling of parking facilitates sustainable design, while the lighting provides a feeling of security and reinforces the building design and landscape design.

We congratulate these award winners and their contributions to soldiers and the Army mission!

*National Ground Intelligence Center, Charlottesville, Virginia.*

*Zussman Mounted Urban Combat Training Site, Fort Knox, Kentucky.*

*Guest House, Fort Buchanan, Bayamon, Puerto Rico.*

POC *is Frank A. Norcross, (202) 761-7113, e-mail: frank.a.norcross@usace.army.mil*

*Frank A. Norcross is the Army Interior Design Proponent in the Engineering and Construction Division, HQUSACE.* **PWD**

# Construction Management Excellence and Hard Hat of the Year Awards

*by Brad James*

Each year, the USACE Major Subordinate Commands and Centers nominate candidates for the Construction Management Excellence and Hard Hat of the Year awards based on their outstanding contributions to construction and quality management (including environmental remediation) for Civil Works programs during the previous calendar year. This year's awardees all made significant contributions to the construction function and the overall project management business process. They are:

| MSC/Center | Construction Management in Excellence | Hard Hat of the Year |
|---|---|---|
| HNC | Ronald L. Wynne | Bill H. Boone |
| LRD | Carl A. Platz | David A. Sieminski |
| MVD | Alan Frank Hunter | James (Jim) E. Farris |
| NAD | Dharan C. (DC) Gupta | David Hockenberry |
| NWD | James Renick | Francis E. Sill |
| POD | Olson T. Okada | Chin Su Pae |
| SAD | Vicky L. Stanley | John T. (Tommy) Gaskin |
| SPD | Gregory M. Schulz | DeWayne Jacobsen |
| SWD | Michael Todd Smith | Joseph Lee Goodson |

In addition to these awards, two national awards were given to awardees selected by an executive review panel from the list above. The winners of these awards were **Gregory M. Schulz** of Sacramento District for the Construction Management Excellence Award and **DeWayne Jacobsen**, also of Sacramento District, for the Hard Hat of the Year Award.

These awards were presented at the USACE Senior Leaders Conference in August. If you have occasion to meet any of the winners, please be sure to congratulate them for their exceptional service, performance and contributions to providing quality facilities for the Army and the Nation.

*POC is Bradley M. James, CECW-ET, (202) 761-5541, e-mail: Bradley.M.James@usace.army.mil*

*Brad James is on the Construction Team, Technical Policy Branch of the Engineering and Construction Division, HQUSACE.*

PWD

# Architect, Landscape Architect and Interior Designer of the Year

*by Frank Norcross*

On 29 April 2002, Principal Assistants for Military Programs and Civil Works (Mr. Bill Brown and Mr. Fred Caver), HQUSACE, selected the Architect, Landscape Architect, and Interior Designer of the Year.

This year, district engineers nominated nine architects, two landscape architects and two interior designers. Winners were selected based on their demonstrated excellence in design, mentoring fellow professionals, and for service to their professions and communities.

The 2002 winners were presented commemorative plaques at the 2002 USACE Senior Leaders Conference.

- Architect of the Year:
  **Brian A. Nohr, AIA**, Omaha District
- Landscape Architect of the Year:
  **Rhonda G. Brown, ASLA**, Galveston District
- Interior Designer of the Year:
  **Aleta S. Greenspan**, Mobile District

The winners' photographs, biographies, and nominations are posted on the USACE professional awards web site, **http://profawards.wes.army.mil**

Congratulations to all of the winners!

*POC is Frank A. Norcross, (202) 761-7113, e-mail: frank.norcross@usace.army.mil*

PWD

# The next big thing in energy conservation: Back to the future

*by Julie Webster and Gordon Cohen*

Some of our best methods of energy management and conservation can be found in an unlikely location: the past. When we take a hard look at the "big picture," we see that the Army may expend enormous energy duplicating work that was done 30, 50, or even 100 years ago. It happens every time we erect a new building instead of using an existing one that could suit the purpose. "Old" doesn't automatically mean "inefficient" any more: it means 'there's gold in them th'ar hills!" And Bronze. Even Silver and Platinum!

Everything on an installation is, in a sense, made of energy, and today this energy costs the Army more than ever. Example: we all know that wood is a renewable resource and is basically a form of stored solar energy. But the price the Army pays for that wood actually includes the gasoline burned to fell the timber, diesel fuel burned to haul the logs — first to the mill, then later to processors, wholesalers, and retailers. This amounts to out-of-pocket cash expenditures for energy, but we usually account for these costs as construction materials. And we rarely account for the additional costs our nation pays for fresh two-by-fours: airborne particulates, greenhouse gases, and depletion of fossil fuel reserves.

This big-picture perspective on energy reflects a new line of thinking about economics called *sustainability*. The concept of sustainability attempts to account for the true, complete costs of all human activity. The Army has embraced and mandated sustainable design as a beneficial and economical way to manage construction projects and facilities. This mandate is incorporated into Engineer Technical Letter (ETL) 1110-3-491, *Engineering and Design – Sustainable Design for Military Facilities* (May 2001). According to a conventional view, it may be appropriate to bulldoze an old building and replace it with a brighter, tighter facility that uses, say, 30 percent less energy.

But if we take a closer look at the big picture, maybe it would make more energy sense to adapt a vintage building to current purposes. Here's why:

Erecting a new building will require an energy investment to either demolish an existing building or to prepare an entirely new site (including utility and sanitation lines, roads, etc., in the latter case). Major energy inputs to a vintage building have already been completed and are stored in the economic value of the sitework, the frame, the plumbing lines, the built-ins, etc., and it may make no economic sense to truck this value away to a landfill. Even with a conscientious demolition program, where high-value materials are recycled, substantial new energy inputs are required to bring these materials back to market.

A 'new wave' approach to facility delivery might see an installation satisfying both sustainablity mandates and historic preservation compliance requirements by exploiting the passive energy-conservation features of vintage buildings. Many facilities built before affordable electrification or refrigeration equipment were loaded with sustainable features because they ***had*** to be in order to be habitable. Many historic and vintage buildings boast:

- Siting features and landscaping that reduce solar energy gains during the cooling season while providing northerly windbreaks and passive solar heating during the heating season.
- High ceilings which, in conjunction with historically compatible ceiling fans, can exploit convection and thermal stratification to comfortably condition the occupied space while moving seasonally uncomfortable temperatures up and away from the occupants.
- Cupolas, monitors, skylights, sunrooms, porches, tall windows, and transoms admit natural light into interior spaces and reduce the daytime demand for artificial lighting.
- User-operable windows, shutters, blinds, shades, awnings, and vents, which provide energy-neutral ways to tailor temperature, lighting, and ventilation to the differing needs of occupants in different zones of the building.

These few examples barely scratch the surface of the energy-saving potential of many older Army buildings. The Army has a huge inventory of vintage buildings requiring some kind of historic preservation attention in order to comply with requirements of the *National Historic Preservation Act of 1966*:

- 14,000 listed or eligible for the National Register of Historic Places.
- 30,000 more that are old enough for the National Register but have not been evaluated.
- 50,000 Cold War-era buildings coming of age for National Register eligibility.

These buildings are economic resources that are already standing in the field, ready to be reborn into the Army's inventory of sustainable facilities. But we do not assume that every old building has historical significance, and likewise we cannot assume that every old building provides the appropriate raw material for sustainable reuse. We need a reliable way to separate the real property from the rubble, but we can't assess any building — whether decades old or commissioned yesterday — for sustainability just by doing a walk-through. So where do we begin to analyze the big-picture energy costs and benefits of facility reuse (or new construction)?

The answer is SPiRiT, the Sustainable Project Rating Tool. SPiRiT was developed by ERDC/CERL in cooperation with the Green Building Council. SPiRiT is a military-specific extension of a Green Building Council sustainability tool called Leadership in Energy and Environmental Design, or LEED. SPiRiT enables the user to rate the sustainability of any ➤

# Solar power heats water, saves money

*by PFC Sean Kimmons*

Directorate of Public Works of the 25th Infantry Division (Light) and U.S. Army Garrison, Hawaii, were recognized for their efforts for renewable energy by winning the 24th Secretary of the Army Energy and Water Management Award.

Secretary of the Army Thomas E. White presented the award to LTC (P) Floyd A. Quintana, DPW Director, and Keith Yamanaka, DPW energy manager at the Pentagon, July 31, 2002.

The major projects leading up to this award were based on solar water heating and photovoltaic lighting systems.

"On a yearly basis, we formulate different energy systems that can save the Army money," said Alan Goo, Deputy Director of Public Works. "Our biggest one has been the placement of solar heater systems."

Last year 650 solar water-heating systems were installed on Halermo Military Reservation housing units, Waianae Army Recreation Center cabins and the Wheeler Army Airfield Fire Station.

This solar initiative has been recognized as the nation's largest, and, by using solar power, the DPW has saved the Army and annual savings of $250,000. It has also resulted in an annual emissions reduction of 2,246 tons and a 2,550,721 kilowatt-hour energy reduction.

Another energy saving project the DPW is working on is the installation of solar energy parking lights.

"These lights can take in sunlight and convert it into energy," said Goo.

Besides using solar energy, the DPW uses another type of energy conservation. "Whenever we are conducting construction, we use the latest energy conserving tools that cut down on energy consumption," said Goo.

Even though the DPW has earned these types of awards in the past, they are still faced against tough competition.

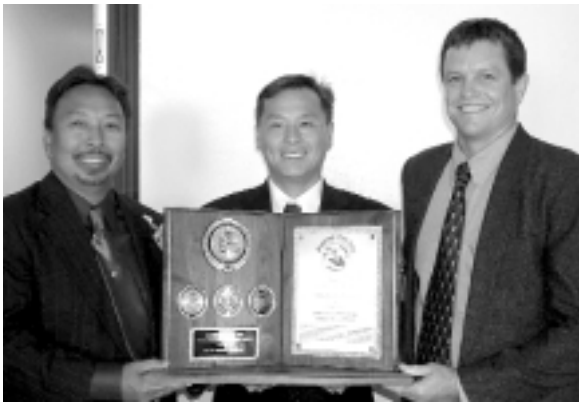
"As industry becomes aware of energy saving techniques, these awards become more competitive," said Goo. "This is a true feather in our cap for the command to win this because the competition is so great."

When Goo spoke about his thoughts on the award, he was ecstatic.

"This is a wonderful recognition for program manager Keith Yamanaka and family housing facilities manager Stanley Reyes, who both worked very hard to make this a reality," said Goo. "They are both heroes."

Just because the DPW earned this award, they won't stop installing solar energy systems.

"It's our intent to look for more areas to expand solar energy systems," said Goo.



*(L to R) Stan Reyes, Keith Yamanaka and Steve Luckett proudly accept the Secretary of the Army award for Energy and Water Management in the Renewable Energy category.*

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*Reprinted from the Hawaii Army.* PWD

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existing or proposed facility in terms of detailed sustainability criteria. The tool uses an integral point system to designate a project's sustainability level as either Bronze, Silver, Gold, or Platinum (the latter being the highest rating). ETL 1110-3-491 mandates that Army facilities be planned, designed, and built to incorporate sustainable design concepts, and that all Army facility projects will aim at achieving the SPiRiT Bronze level.

When energy sustainability is an installation's goal, as it now must be, the application of SPiRiT to historic properties offers the Army a tremendous opportunity to harness 'yesterday's energy' in order to reduce tomorrow's costs. A sustainable approach to facility delivery can help us retain the value of past real property investments, improve quality of life on installations, and preserve the national heritage — both in terms of energy resources and history.

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# Savannah District awards its first sustainable design showcase project

*by Verdelle Lambert*

Savannah District has just broken ground on a sustainable design showcase project at Fort Gordon, Georgia, that has exceeded expectations.

Gordon's installation communications facility was originally scheduled for construction in the 2004 MCA (Military Construction – Army) Program but in July 2001 Congress bumped it up to the 2002 program, giving the district only until July 31, 2002, to design the project and award a construction contract.

"We knew we probably couldn't meet the schedule using the normal design-bid-build procedure," said Efrain Rosario, the district's senior project manager for Fort Gordon. "Normally, that takes two years. We met with the Project Development Team (PDT) in July 2001 and decided that a design-build request for proposal (RFP) was the best acquisition strategy. To further expedite the project, we decided to do 10 percent design in-house."

A month before Congress put the project on a fast track, the Army had mandated that sustainable design be incorporated into all military construction projects to the extent possible, effective immediately. This meant designing environmentally friendly buildings that are constructed with an eye toward depleting less of the nation's natural resources. Using the Army's Sustainable Project Rating Tool (SPiRiT), project teams aimed to achieve at least 25 out of a possible 100 SPiRiT* points on all projects.

About the same time, the communications facility at Fort Gordon was selected as a district showcase project on sustainable design, which meant that the team had to try to achieve a higher SPiRiT rating.

"This was the first project where we had to incorporate the sustainable design into the RFP, so we really sort of invented the template on this project," said Judy Milton, architect and district point of contact on SPiRiT. "Our goal was to achieve 50 points."

In the end, the district awarded the project ahead of schedule, under budget (87 percent of the programmed amount), with a gold SPiRiT rating of 64 points for sustainable design (50 points is required for a gold rating), and with a shorter construction period than estimated. The contract was awarded June 17 to Teng Construction, a Chicago-based firm.

"You always want to come in under the budget, but to do it as well as we did and end up with the quality of work that we're expecting to see out of this is very gratifying," said Carlton Shuford, installation master planner for Fort Gordon. "From the installation's point of view, we really feel we're going to get our money's worth."

### The project

The communications facility will house in one building all of the communications activities currently performed in five buildings around the fort.

"The old arrangement was not efficient," said Rosario, "so the installation master planner developed a project to combine the different offices so that anyone having business with the DOIM (Directorate of Information Management) can go to one place on the installation."

"Trying to get the building programmed early on was a challenge," said Shuford, noting that the Directorate of Public Works had been looking at the need to replace the old building for about five years. "On the surface, this building's mission might be viewed more as administrative, which is harder to raise in the priority of things for funding. But this building is vital to every mission on the fort, because this is the place where the telephone exchange, all the computers for the network system— all the wiring takes place."

In order to make the importance of the facility to the installation obvious, Shuford interviewed employees about their jobs. The actual process of fine-tuning the programming document took about 18 months.

### Acquisition strategy

In past years, Savannah District has typically solicited low-price bids/proposals on its projects, using design-bid-build invitation for bids and low-price technically acceptable RFP's.

"This year we have been going outside the box, and almost all of the solicitations are 'Best Value' requests for proposals," said Rosario. "On this project, it happened that the best firm submitted the best proposal and was also the low bidder."

The team used a two-phase selection process to award the contract and included language in the RFP emphasizing the importance of sustainable design in the project. More than 15 firms competed in Phase I, and the Source Selection Board chose the five most highly qualified offerors (those who had shown that they could build environmentally friendly projects) to submit proposals for Phase II.

"The proposal that won gave us back practically what we put out," said Milton. "Teng didn't spend a lot of energy and time reinventing the building layout: they focused their effort on ways to make the building really energy efficient."

It took 11 months from start of design to award of the construction contract. "This was possible, in part, by the use of the two-step design-build procurement," noted Rosario.

### Sustainable design

A growing trend for at least the last five years, sustainable design (or green building) is becoming more and more mainstream. It focuses on doing things in a way that does not use up the nation's nonrenewable resources— does not pollute the water or air, does not eliminate all of the green space (undeveloped ➤

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areas)— in essence, does not jeopardize future generations' ability to live on the planet.

The private sector uses the scoring system LEED (Leadership in Energy and Environmental Design) to set goals and measure achievement in sustainable design.

"LEED says, here's a goal; if you meet this goal, you earn a point," explained Milton. But you don't have to meet this goal— *you choose which points you go after*, based on the nature of your project and what its opportunities are."

SpiRiT, the Army's adaptation of LEED, is a point system covering several broad categories. Points are earned for accomplishing certain goals.

The Fort Gordon project was well suited to showcase sustainable design: There was no standard design to follow, no preconceived notion of the building, no pre-existing floor plan.

"Basically," said Milton, "we looked at the existing facilities, talked to the user and employees, and put pencil to blank paper. So right from the beginning, as I started to develop the floor plan and work with the site engineer on how we were going to site the building, I already had certain points I was going to try to earn."

Shuford and the user (DOIM) became, in effect, part of the design team. Led by Milton, the team went through all of the different SPiRiT categories and decided which of the SPiRiT points they would require the contractors to include in their proposals.

"Basically," said Milton, "we looked at what we thought would have the least impact on the initial cost to the project, because no funding was provided for sustainable design, and we still had to meet our budget.

"Sustainable design," she explained "is not more important than meeting the customer's functional needs or more important than meeting the budget. It's something we have to put into the pot when we're making our decisions and trying to do as well as we can within the constraints that we have."

*Ivan J. Dvorak of Teng Construction (l-r); COL Roger Gerber, commander of Savannah District; Bob Young, mayor of Augusta, GA; COL Michael Guthrie, deputy post commander, Fort Gordon; and BG Peter Madsen, commander of the Corps' South Atlantic Division, break ground for Gordon's new installation communications facility.*

Features mandated by the RFP included operable windows and perimeter light controls, day lighting throughout the occupied area, a light-colored roof, low VOC paints and sealants, bike racks, showers, and a site layout that provides shading on paved areas.

"We were fortunate that the site, which had already been selected, earned five points," said Milton. "Site selection is outside the scope of our activities."

But the RFP requirements totaled only 25 of the 50 required points.

Using the district's suggested floor plan, which also included non-mandatory sustainable design features, Teng came up with another 39 SPiRiT points, including restoration of destroyed habitat through landscaping, no increase in storm water runoff, use of a high-efficiency landscaping/irrigation system, 20 percent reduction in water usage through high-efficiency fixtures, reduction in annual energy consumption through high efficiency mechanical and electrical systems, and recycling construction waste.

"We have to verify that everything the contractor said he was going to do was done," explained Rosario, "then we can get certified as a SPiRiT gold project. Beyond that, we will have the satisfaction that this is a project that will not burden Georgia's resources."

The team broke ground for the project in August and it is scheduled for completion in November 2003.

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# 10-Year energy management roadmaps for FORSCOM installations

*by Graham Parker*

To reach the energy reduction and sustainability goals of Executive Order 13123 and to minimize overall energy and water costs, FORSCOM has embarked on a program to develop comprehensive 10-year *Energy Management Plans* for each of the 11 major FORSCOM installations. These plans will identify activities and projects critical to reaching the Executive Order (E.O.) goals as well as help assure a reliable and secure energy supply. Each FORSCOM installation will be responsible for developing a plan that is closely linked with the installation Master Plan.

The *Energy Management Plan* is a roadmap for actions by the installations that cover demand side (efficiency) elements and supply side (commodity procurement), as well as energy/water security assessments and funding/financing resource requirements.

At FORSCOM's request, the Pacific Northwest National Laboratory (PNNL) is assisting the installations in developing their plans. The individual installation plans will be rolled up to form a total FORSCOM *Energy Management Plan*. Each installation will develop a plan that meets its own energy-management needs.

Installations may want to expand the plan to cover all infrastructure, or include additional energy-management elements. To support the development of the overall FORSCOM *Energy Management Plan* and budget projections, the following elements are to be included, at a minimum, in each installation's plan.

### Demand-Side Requirements

For the demand side, each plan is expected to:

- Project annual installation energy-use intensity (EUI) on a million Btu/ft2 basis from FY2002 through FY2010, covering all installation facilities. The plan should document the FY1985 baseline, the current (FY2001) level, and the energy-consumption reduction goals levied by the E.O.
- Document numerically how the goals will be reached through contributions from new construction, rehabilitation, demolition, efficiency retrofit, improved operations and maintenance (O&M), and energy-awareness activities. If the installation believes that it cannot achieve compliance with the E.O. goals, the plan should include a detailed explanation.
- Describe how the installation will manage compliance with the water conservation, petroleum-use reduction, Energy Star, procurement, and greenhouse-gas emission requirements of the E.O.
- Describe how the installation will manage compliance with the E.O. requirement that the entire installation be audited every 5 years.
- Identify, on an annual basis, the financial resources that will be required to achieve E.O. objectives. These resources might include utility modernization funding for non-privatized utilities and central heating/cooling systems, installation-level funding, including environmental program funding, design assistance to improve the energy performance of construction and rehabilitation projects, Energy Conservation Investment Program (ECIP) funding, Energy Savings Performance Contract (ESPC) funding, Utility Energy Services Contracting (UESC) funding, Resource Efficiency Manager (REM) positions, energy/water-efficiency awareness materials, and/or other available mechanisms. The plan should document funding requirements such that required resources can be identified and submitted as unfunded requirements. ➤

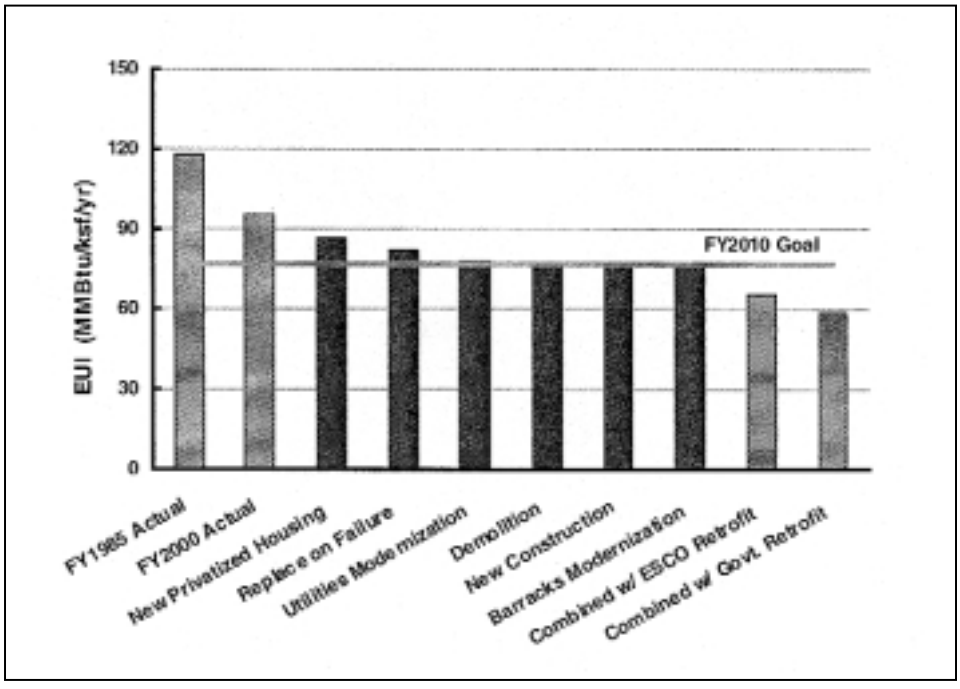


*Figure 1. Example of pathway of actions for installation to reach energy use intensity goal.*

# Merrill Center—first LEED platinum certified building

The Chesapeake Bay Foundation's Phillip Merrill Environmental Center is known as the world's "greenest" building. One of the ten most important examples of sustainable design, it is the first to receive the U.S. Green Building Council's LEED Platinum certification. LEED stands for Leadership in Energy and Environmental Design.

The Merrill Center was constructed at a higher "first-cost" than any Army building, but, after over a year of operation, it is demonstrating a much lower operating cost (about half) than a conventional building. Another benefit of high-rated LEED buildings is increased productivity.

A group of agency "sustainability representatives," including USACE's Rik Wiant, recently had a chance to visit the Merrill Center. Although most of them had already had a virtual tour (<http://www.cbf.org/merrillcenter/index.htm>), all were nonetheless surprised at how attractive the facility was as a workplace. The building, about the size of a large Directorate of Public Works or Division Headquarters, relies on day-lighting and natural ventilation as much as possible, giving the open plan office space a light and airy feeling.

*Visitors admire the Phillip Merrill Environmental Center—The world's "greenest" building.*

Most of the visitors remarked how they would love to work in a place like this, reenforcing that sustainable design and development is not just about saving energy costs or using less water for toilets, but about creating places where people feel good about working.

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### Supply-Side Requirements

The following are the expected requirements for characterizing the supply side:

- Describe how the installation plans to work with franchise (energy) suppliers, or within competitive markets, to procure energy commodities and minimize commodity costs.
- Describe how the installation will meet green power/renewables, and reduced power plant air-emission requirements of the E.O.
- Describe any plans for onsite generation—including small-scale distributed generation—of electricity.

### Energy-Security Requirements and Activities

Energy security is of critical importa

- Describe any plans to assess and improve the security and protection of energy and water systems on the installation.

### Plan Example Analysis

A generic example of the summary "compliance pathway" for achieving the E.O. energy use intensity goals is shown in Figure 1. As part of the reporting, we also develop a companion listing of "resource requirements" by year (not shown). This table is a summary of the resources (funding) required to meet the energy-use goals and thus forms the basis for budgeting for appropriated federal funding (e.g., ECIP) as well as private-sector funding (e.g., UESC, ESPC) technical assistance (e.g., design assistance or sustainability compliance) necessary to achieve the forecasted savings and thus achieve the EUI goal.

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PWD

# Can FORSCOM meet its energy savings goals?

*by Daryl Brown and Jim Dirks*

FORSCOM energy consumption per square foot of building floor space (hereinafter referred to as "energy intensity") has dropped from 118.8 MBtu/ksf in 1985 to 95.9 MBtu/ksf in 2000 or 19.3%. Energy goals mandated by Executive Order 13123 require energy intensity to be reduced by 30% and 35% relative to the 1985 baseline for the years 2005 and 2010, respectively. This puts FORSCOM about 3%, or 4 MBtu/ksf, behind where it should have been in 2000 to be "on pace" for achieving the goals.

The objective of a study conducted for FORSCOM by the Pacific Northwest National Laboratory (PNNL) was to estimate the potential impact on FORSCOM's energy intensity in 2010 from key planned or prospective changes to the installation' energy-related infrastructure. This includes changes from the natural turnover of certain energy-related equipment, ongoing or currently planned programs, and retrofit with cost-effective energy efficiency measures.

The specific changes evaluated are:

- Replacement of Equipment Upon Failure
- Barracks Modernization
- Housing Privatization
- Other New Construction
- Building Demolition
- Utilities Modernization
- Cost-Effective Energy Efficiency Measures

The general approach is to develop a model that represented the current energy infrastructure and energy use at each installation. The energy impacts resulting from the prospective changes listed above are then estimated by making changes to appropriate assumptions in the model for one prospective change at a time.

Building energy use is estimated with the Facility Energy Decision System (FEDS) model. Non-building energy use including central energy plants, thermal distribution, electrical distribution, exterior lighting, and water (waste, irrigation, and potable) pumping are modeled in a supplementary spreadsheet that incorporated FEDS model output.

The impacts of individual changes across FORSCOM are shown in Figure 1. Cost-effective energy efficiency measures were identified as having the greatest energy savings potential for any single item, but significant reductions in energy intensity were also predicted for replacing equipment upon failure, utility modernization, and housing privatization.

The raw figures indicate that the combined effect of all changes, including full implementation of cost-effective ESCO-funded retrofits, would allow FORSCOM to beat its energy efficiency goal by 8 MBtu/ksf. If all cost-effective government-funded retrofits were implemented, FORSCOM's energy intensity would drop by an additional 7 MBtu/ksf. Corrected for interactive effects, the potential reduction in energy intensity should put FORSCOM close to its FY2010 goal.

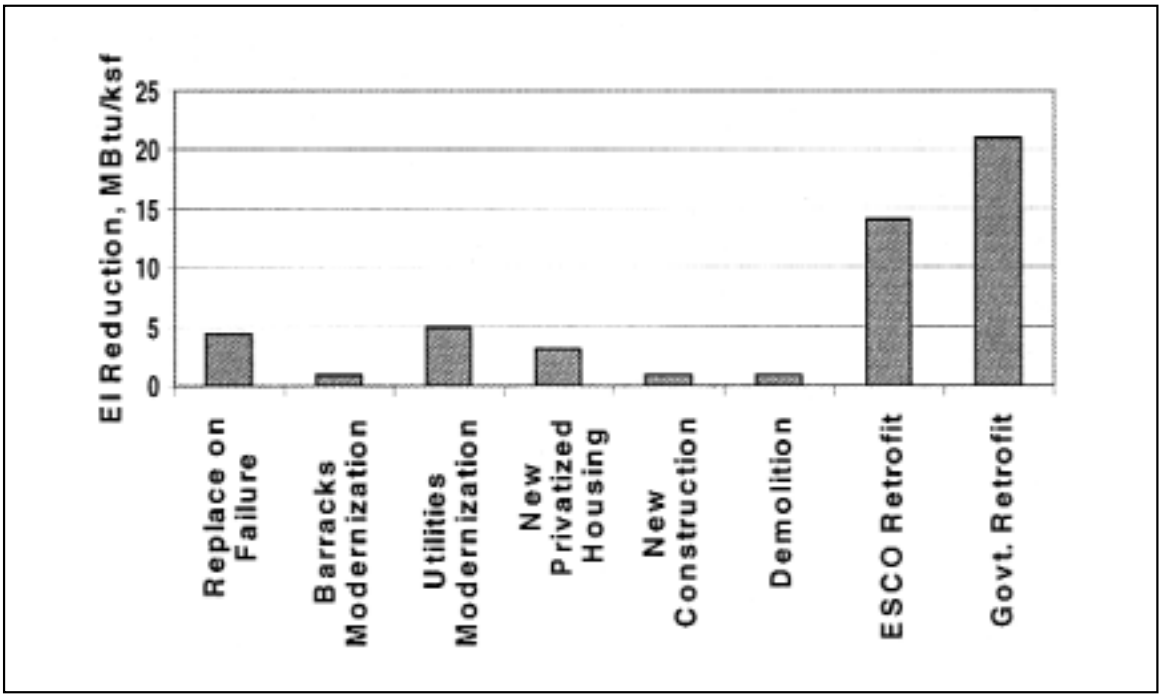


*Figure 1. Impact of changes across FORSCOM*

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*Daryl Brown and Jim Dirks are Staff Engineers at the Pacific Northwest National Laboratory.* PWD

# Hawaii DPW partners to save energy

*by Keith Yamanaka*

Teaming with the Department of Defense – Hawaiian Electric Company Executive Committee (EXCOM) has produced big benefits in saving energy and increasing public energy awareness for the United States Army Garrison, Hawaii, DPW. Partnering with the Hawaiian Electric Company (HECO) and the Navy, the DPW used the Navy's Utility Energy Service Contract to expeditiously install 600 tons of central cooling for eight barracks buildings and initiate the nation's largest solar water heating project.

- These projects resulted in:
- Annual energy savings of 14,965 MBtu
- Annual cost savings of $394,939
- Utility demand side management rebates of $610,650.

The DPW as a representative of the Army, has established partnerships with other defense agencies and HECO in a commitment to save energy and lower electrical demand. One of the tools in achieving this goal is the Navy – HECO Basic Ordering Agreement (BOA). Through the partnership, arrangements were established to allow Army access to this BOA, saving the Army time and effort in preparing its own UESC.

The DPW, entered into a formal memorandum of agreement with the Pacific Division Naval Facilities Engineering Command to use the BOA. Under this agreement, the Navy would provide contract services and the DPW would provide project identification and coordination, construction inspection and technical oversight.

- The many benefits of using the BOA include:
- Qualifying requirements: pay back period must be 10 years or less and the savings to investment ratio must be 1.5 or greater.
- Utility rebates are identified up front and used to lower project cost.
- Controlled oversight by the PUC.
- Design/build capability.
- HECO in-house energy consultation and management assistance.

The first project that was identified and actually motivated use of the BOA was the installation of a central 600-ton chiller system for eight barracks buildings on Schofield Barracks. This project was a quality-of-life issue because the eight existing 100-ton air cooled reciprocating chillers were rapidly failing and extremely noisy. Time constrained by FY funds, DPW needed to execute quickly and looked to the BOA.

The BOA provided an all-in-one package that included energy analysis, design, and construction. The scope of work included design and construction of a central 600-ton centrifugal chiller, cooling tower, condensor pump, chill water pump and piping replacement.

The project also successfully met the challenges of meeting strict state historical preservation requirements.

*Workers install solar panels.*

The second BOA project was the installation of solar heating systems on 610 Helemano Army Family Housing units, 39 Waianae Recreation Army Cabins, and the Wheeler Fire Station. The DPW recognized the effectiveness of switching to solar water heating as a green ECM and using the BOA to obtain the maximum utility rebate to buy down the project cost.

The benefits of the EXCOM and HECO UESCs are available to all branches of the military and cover all areas serviced by Hawaiian Electric Industries.

The EXCOM has introduced the Army to UESCs beyond the geographic boundaries of the Navy BOA. An example is the DPW using the Coast Guard BOA for projects at Pohakuloa Training Area on the Big Island.

Active participation in the EXCOM and the BOA projects has also brought widespread recognition for energy conservation and the Army's efforts.

The fact that the Helemano/Waianae solar heating project is the largest in the nation has put the Army and solar heating on the front page of two of the largest local newspapers, bringing to public attention the benefits of solar heating and energy conservation in general.

The E&F chiller project has the distinction of being the highest HECO rebate ever issued for a single ECM. HECO presented the DPW with a plaque recognizing this achievement. The project scope also included factory training to educate in-house personnel, insuring energy efficiency of the project and other similar systems through proper maintenance.

Participation in the EXCOM lets all branches share in their combined achievements and, at the same time, instills constructive competition among all branches of the military to save energy. The EXCOM even puts on an inter-service electric car race as a featured event with the Hawaii High School Electron Marathon. This 3-year-old event, which the Army has won since 2000, promotes constructive competition and allows the military and civilian DOD to interact with high school students interested in science and technology that will further energy conservation.

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PWD

# Hybrid electric vehicles save energy, not dollars

*by Dr. Michael Canes and Steven J. Stone*

EO 13149 requires federal agencies to reduce vehicle petroleum use 20% by the end of FY05 relative to FY99, and to increase the average miles per gallon (mpg) of new vehicle acquisitions by 1 mpg in FY02 and by 3 mpg in FY05. Public Works managers must make difficult decisions to meet the requirements of Executive Order (EO) 13149 within their limited resources.

There are many possible routes to achieving these goals, including the use of alternate fuel vehicles, greater fleet fuel efficiency, and more efficient use of existing vehicles. In an era of budget stringency, federal managers need to be aware of the economics of the alternatives, and to allocate limited resources where they will get a good return.

A hybrid electric vehicle uses a combination of an internal combustion (IC) engine and an electric motor for propulsion. When stopping, hybrids are able to transform kinetic energy into electric, a process called regenerative braking, which reduces mechanical brake wear. Hybrids provide greater fuel economy than vehicles powered only by IC engines, reduced emissions and less brake maintenance.

The General Services Administration has indicated it will purchase hybrids if there is sufficient interest among agencies to warrant it. Two vehicles of interest are the Toyota Prius and the Honda Civic hybrid.

In response, the U.S. Marines have indicated they would be interested in leasing up to 500 hybrid vehicles per year to help them achieve the EO petroleum reduction and mileage goals. Other agencies too may be considering hybrids as a readily available technology for the purpose.

But what are the economics of these vehicles? Do they promise satisfactory returns?

In a study of the economics of hybrids by the Logistics Management Institute, the Prius and the Honda Civic hybrid were compared to the closest model powered only by an IC engine. In the case of the Prius, this was the Toyota Echo, and in the case of the Civic, by its IC counterpart.

The analysis took the form of calculating net present values of lifetime savings for each vehicle under a variety of assumptions.

In the base case, vehicles were assumed to be driven 13,000 miles per year and to last for 12 years, while batteries were assumed to be replaced once, after 8 years, at a cost of $3000. A lifetime cost of gasoline of $1.50 per gallon was assumed while reduced brake wear was assumed to result in $50 per year of maintenance savings.

The incremental cost of the Prius relative to the Echo and of the Civic hybrid was assumed to be $3000, and a 6% rate of interest was used.

There is uncertainty regarding what fuel efficiency gain might actually be realized with hybrid technology. The study used EPA mileage ratings or manufacturer estimates and, therefore, assumed that the Prius gets 48 mpg as compared to 34 mpg for the Echo, while the Civic hybrid gets 44 mpg as compared to 33 mpg for its IC counterpart.

The table shows the net present values (NPV) of savings for the two vehicles in the base case and under alternative assumptions.

The NPV of savings is negative. In other words, they are $3100-$3200 more expensive than their IC counterparts over their lifetimes. For this type of vehicle, where the conventional counterpart already gets high gasoline mileage, hybrid technology does not provide net monetary savings.

*Steve Stone and Dr. Michael Canes flank the Civic hybrid. (Photo courtesy of Koons Toyota)*

Despite these results, it is relevant to compare hybrids with other means of achieving the goals of the Executive Order. Conceivably, alternative fuel vehicles or other such means might be even more expensive.

Also, hybrids reduce emissions such as hydrocarbons, nitrogen oxides, sulfur oxides, carbon monoxide, particulates and carbon dioxide. These reductions have value in many communities struggling to meet the attainment standards of the Clean Air Act.

Further, the petroleum reductions themselves are significant. In the base case, the hybrid Civic conserves about 100 gallons per year and the Prius, 110. Thus, a fleet of 100 vehicles converted to these hybrids would be able to save between 10,000 and 11,000 gallons of fuel per year.

As you can see, hybrids offer a number of benefits, but, for the time being, good returns on investment do not appear to be among them.

| Assumptions | Prius | Civic (NPV $) |
|---|---|---|
| Base case | -3061 | -3225 |
| No battery replacement | -1178 | -1342 |
| 20,000 miles per year | -2305 | -2558 |
| 8% rate of interest | -2983 | -3131 |
| $2 per gallon cost of gasoline | -2593 | -2812 |

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PWD

# Huntsville Center hosts ESPC program meeting

*by Joan Chamness*

Huntsville Center hosted a 3-day meeting in July to discuss and improve the Energy Savings Performance Contract (ESPC) process. The Center's ESPC Team and representatives from 11 contracting firms throughout the United States attended the meeting.

The ESPC program provides a tool for capturing savings that provide funding for energy efficiency improvements. The Huntsville Center provides the engineering, legal, contracting and program management for ESPC; and the contractor provides the financing, design, construction, and maintenance for energy saving devices and systems. The contractor receives payment from the resulting utilities cost savings and ancillary cost reductions.

In the early years of ESPC, the Center awarded five contractors an indefinite delivery-indefinite quantity (ID-IQ) regional contract for North Carolina, South Carolina, Georgia and Virginia. Based on the success of the 4-state award, the 46-state (plus Washington, D.C. and Puerto Rico) regional contracts were awarded to 11 contractors.

Since the conception of the ESPC program, the Center has maintained a close relationship with all the ESPC contractors in order to ensure:

- Program objectives are met.
- ESPC customers are satisfied with contractor improvements and maintenance.

All Energy Service Companies (ESCO) contractors were requested to provide the Center the status of their contracts, including all current task orders, before the meeting in Huntsville. The first and third days of the meeting were devoted to one-on-one meetings between the Center and each contractor to discuss the status of contracts.

"All work and no play" was definitely not what the Huntsville Team had intended when they planned these meetings. Therefore, after the first day of meetings concluded - everyone was invited to "Greenbriar," one of Huntsville's landmark restaurants, for some good Southern barbecue and 25-cent ice cream. This provided an opportunity for everyone to relax and put aside "work issues" - at least for a while.

Sally Parsons and David Shockley (Program Managers for ESPC), Bobby Starling, (Chief, Facilities Support Division), Neal Graham (ESPC Project Manager), and Jimmy Haywood, (ESPC Lead Engineer) presented a variety of topics for the second day of meetings, including:

- Personnel changes in the ESPC Program and status of FY02 task orders.
- Possible new work with the Corps of Engineers Civil Works Hydropower Program that could result in projects averaging $50 million per site.
- Future objectives with current ESPC customers and possible new work with other installations.
- Current Quality Assurance/Quality Control Process and "roles" of each in ESPC.
- Use of Resource Energy Managers to provide much needed manpower at installations and assistance to enhance their energy programs at a minimal cost.
- Measurement and verification issues.

The major accomplishment of this meeting was the discussion from all the contractors on ways that the Center could improve the ESPC process. Bobby Starling, Chief, Installation Support Division, led this discussion and expressed the Center's commitment to solving some of these problems.

The Center's relationship with the ESPC contractors is valued by the members of the ESPC Team, and it is most important that the Center maintains its partnership for future work.

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*Joan Chamness is a PM Specialist in the Facilities Support Division of the Installation Support Directorate at Huntsville.*

PWD

# Army purchases 19M kWh of green power

The Army has taken a big step in support of renewable energy with a commitment to purchase 19 million kWh/yr of wind and landfill gas generated power. This will help us meet the goals set forth in EO 13123 and the new direction from Congress.

The Army has entered into a contract with Washington Gas Energy Services to purchase 5,000,000 kWh of wind power and 14,000,000 kWh of landfill gas annually through December 2004.

The wind farm, located in West Virginia, will deliver 5 million kWh of renewable power annually to Walter Reed Army Medical Center, Adelphi Labs, and Fort McNair through the PMJ wholesale electric market. The sites will receive environmental credits for this purchase.

This purchase makes the Army a leader in the Federal Government in the purchase of renewable energy.

PWD

# Fort Knox strikes energy-savings gold in partnership with utility

*by Missy Sherrod*

The U.S. Army's Fort Knox, "The Home of Armor," and guardian of one of the nation's gold reserves, faced a big challenge: along with the other half million or so federal facilities nationwide. The Army installation needed to cut energy use but did not have funding to make energy-conserving upgrades.

Under federally mandated energy-reduction goals, all federal facilities must reduce energy use 35 percent by 2010. Gary Meredith, Energy/Project Manager at Fort Knox, struck gold in a partnership with Nolin Rural Electric Cooperative. Meredith and Nolin Vice President Vince Heuser sat down to talk about energy conservation at Fort Knox and came away with a plan that allowed Fort Knox to meet energy-reduction goals through investments financed by the electric cooperative.

The purpose of the contract is to save energy—to directly or indirectly reduce the peak demand and total consumption of electric power, natural gas, and water. Annual savings are more than $2.8 million due to reducing usage by 13.8 million kWh of electricity and 280,000 million cubic feet of natural gas.

About 35 miles south of Louisville, Kentucky, Fort Knox, with a population of 26,900, is virtually a small city served by multiple utilities and businesses. The installation has 5 substations; its peak load is 40 MW; and its on-post population is 24,000. Situated on 109,000 acres, Fort Knox has more than 3000 buildings including its famous gold vault, the Ireland Army hospital, and a 3100-student school system.

Nolin's dedication to customer service and relations facilitated Fort Knox's energy program. Many companies wouldn't be interested in reducing customer usage of their product. Heuser says Nolin is "committed to helping our members in whatever way we can. As a member-owned cooperative, our primary focus is not increasing revenue, but helping our members conserve energy." And this is exactly what the utility did for Fort Knox.

Nolin and Fort Knox entered into a utility energy savings contract (UESC) in 1996 that now totals nearly $18 million in project investment and spans numerous delivery orders. This long-term partnership is typical of utilities and federal agencies interested in achieving real energy savings.

Says Meredith, "I like working with the cooperative because of their no-nonsense approach to getting the job done to our specifications with the minimum amount of paperwork. Keeping it simple has kept costs down and is a key to success. The efforts of the entire utility team and especially Vince Heuser have reflected a can-do attitude and have always been positive."

Together, the co-op and installation identify viable projects and formalize them in simple delivery orders. These have included geothermal heat pump installation, boiler-chiller replacements, lighting retrofits, window replacements, and high-efficiency motor retrofits. After each project is approved and implemented, Fort Knox repays the loan over a 10- year period as part of its electricity bill. Fort Knox's project costs are offset by the energy savings generated by the retrofits. HQ TRADOC, Fort Knox's major command, reimburses the installation for payments made to the utility company for these projects as an incentive to aggressively pursue energy conservation measures and meet assigned goals.

One of the more ambitious energy conservation projects Nolin undertook, in partnership with the Trane Company, is a $4.8 million boiler-chiller replacement at Fort Knox's Ireland Army Hospital. Annual energy cost savings from this delivery order are $1,004,011; annual energy savings are 131,756 MMBtu. Project payback is less than 5 years.

Another high-profile project was the installation of Fort Knox's Supervisory Control and Data Acquisition (SCADA) system, which gives up-to-the-second information on load, voltage, and current, as well as status of capacitor banks, circuit breakers, and voltage regulators. SCADA allows Fort Knox to achieve faster service restoration, greater reliability and better quality service.

According to Heuser, "Nolin recognizes that Fort Knox is a vital part of our community; therefore we want to do everything we can to help the base continue to grow and efficiently serve the needs of our military in the future."

Nolin helps Fort Knox meet energy-reduction goals by keeping its energy use down and improving the living and working conditions of its soldiers and civilians on base.

### Benefits of Contracting with Rural Electric Cooperatives

Utility contracting with rural electric cooperatives offers many benefits to Federal agencies, including access to a wealth of expertise. UESCs can reduce procurement time and reduce the resources required to put the projects together. UESCs also offer the flexibility to allow agencies to choose options such as guaranteed savings and measurement and verification.

Rural electric cooperatives can offer federal agencies energy-efficiency and renewable-energy projects with a key advantage—low-interest financing from their own "bank" —the National Rural Utilities Cooperative Finance Corporation (CFC). CFC is a $20 billion finance organization that was created in 1969 to serve its approximately 1000 rural electric cooperative member–owners.

The variable interest rate Nolin charges Fort Knox has been under 4% and has risen above 7% only once in the past 5 years. Interest payments can form a significant portion of any financed project, so the low rates available through a UESC with rural ➤

# Brothers work on overheating problem at Fort Irwin

The Directorate of Public Works (DPW) at the National Training Center (NTC) at Fort Irwin had been experiencing problems with solid-state devices overheating at remote sites and the problem was spreading. Desert temperatures there can exceed 115 degrees F for days at a time.

The installation uses a radio controlled well telemetry system to manage its water infrastructure. The system consists of a radio receiver and transmitter and various other electronic components in a metal (NEMA) box at the well sites.

The combination of the sun and internally generated heat has caused many systems to malfunction. The DPW looked for solutions to the problem, including building an enclosure around each box and connecting an off-the-shelf air conditioner.

During the course of the investigation, the DPW was allocated two summer hires, college students Richard and Robert Schmalzbach. Richard had some exposure to electronics, while his brother Robert had just finished his second year in college majoring in electrical engineering. They were both assigned to the Master Planning/Energy section of the DPW.

Rene Quinones, planner/energy manager, quickly put the brothers to work investigating the overheating situation to privide training in the process of problem solving, the development of options and the development of project specifications. They went to each site and performed an analysis of the problem, finding that several of the boxes lacked any type of shading, insulation, or lightning protection and had temperatures in excess of 120 degrees.

Additionally, the brothers Schmalzbach were exposed to Peltier Effect cooling/heating. This is the use of solid-state devices that act as a heat pump but have no moving parts. As electrons move across a direct current (DC) junction, they absorb heat from one side of a plate and move it to another. If the current flow is reversed, the process is also reversed. The brothers were provided a basic Peltier module with a heat sink, a power supply, and meter.

From their experiments and research on the web for Peltier devices, also listed as thermoelectric cooling devices, a small sheet of ice was developed in the office whose air temperature was 76 degrees F. As a result of their experiments and the researching of various companies, the DPW abandoned its attempt to build enclosures and install an air conditioner.

The brothers then developed a specifications package to install a lightning protection system, which included writing the specifications for the project. They also developed site maps using various graphic programs.

Richard and Robert Schmalzbach have since left the DPW to return to their schooling but feel they spent their summer working on a "cool" project.

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electric cooperatives can be a great deal for government customers. Electric cooperatives have expressed strong interest in serving their federal customers. The National Rural Electric Cooperative Association (NRECA) and CFC recently hosted a FEMP workshop to train other cooperatives in developing UESC business; Meredith and Heuser were featured speakers.

### Lessons Learned

Both utility and base personnel are learning valuable lessons through their experience at Fort Knox and are applying them to ongoing projects. They recommend the following actions to ensure successful projects:

- Educate occupants about projects.
- Choose reliable contractors.
- Start with small projects—work up to larger ones.
- Minimize disruption for building occupants.
- Choose projects that contribute the quality of life for building occupants.
- Promote the goodwill and benefits of the projects through news media.

### Looking Ahead

Fort Knox has received a lot of recognition for its energy-efficiency efforts under this project, including the Army Energy Conservation Award for 1997. The installation's energy-savings achievements are held up as a model for other Army installations. Fort Knox continues to realize energy savings through this important partnership and proves that rural electric cooperatives can offer unique advantages to the federal sector.

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*Missy Sherrod is a technical editor/writer subcontracted to the Oak Ridge National Laboratory* **PWD**

# Commissioning of C4ISR facilities

*by Ron Mundt*

Batteries are not maintained, resulting in massive system failures and complete installation shutdown. Control wiring is not properly connected, resulting in installation shutdown six months later. A newly installed standby generator system does not have operation manuals after project completion, resulting in continued problems for over ten years. These situations can and actually did happen at Army facilities.

These types of system failures could cause even more severe problems if they occurred at command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) facilities.

It is not unusual for electrical systems to have problems during the installation period. Sometimes, it takes the more seasoned engineers and technicians to solve operational problems and fine-tune the system to operate as it was designed. A realistic commissioning plan, when implemented correctly, will minimize initial, and long-term problems.

The following paragraphs discuss an example of a commissioning program's planning stages which can be used to commission a new system as shown in figure 1 (Commissioning Plan Example). The time period in which a commissioning process begins determines what steps in the planning stages are considered:

*a. Initial commissioning (kick-off) meeting.* The first commissioning meeting may start as early as before a contract is awarded or as late as after the system has been installed (before it is turned over to the customer). The participants in the meeting should include customer, government contractor personnel, participating engineers, commissioning personnel (may be an independent commissioning contractor or government engineer), general contractor, and electrical and mechanical sub-contractors. The participants should be all considered "part of a team." The topics discussed at this meeting should include areas of responsibility, expectations, overall presentation of system, methodology, potential problem areas, etc.

*b. Review initial statement of work (SOW).* All participants should review the SOW that describes the requirements of the commissioning process. The customer (or designated authority) should have the ultimate control where decisions are required.

*c. Review drawing submittals.* After the systems are installed, drawings should be submitted for review and comment. Sometimes, the review may be before systems are installed. Care must be taken to verify that the drawings submitted reflect the actual installed system.

*d. Approval meeting.* After the SOW and drawing submittals have been submitted, reviewed, comments made, and comments incorporated, approval of documents should be provided.

*e. Systems operation document (SOD)/systems operation and maintenance manual (SOMM) document.* Prime contractor should provide a SOD or SOMM. These documents are required in order to develop specific commissioning tests.

*f. Submit functional performance tests (FPTs).* System/component tests or FPTs should be developed from submitted drawings, SODs and SOMMs. The tests should include large component testing (i.e., transformers, cable, generators, UPS), and how components operate as part of the total system. The commissioning authority should develop the test. The commissioning authority should not be the installation contractor (or sub-contractor).

*g. Quality assurance.* As the equipment/components/systems are installed, quality assurance procedures should be administered to verify components are installed in-accordance with minimum manufacturer's recommendations, safety codes, and acceptable installation practices. Quality assurance discrepancies should be identified and added to a "commissioning action list" that must be rectified as part of the commissioning program. These items would usually be discussed during commissioning meetings. Discrepancies are usually identified initially by visual inspection.

*h Review FPTs.* The tests should be reviewed by the customer, electrical contractors, quality assurance personnel, maintenance personnel, etc. (the commissioning team). Areas of concern should include: 1) Are all functions of the system being tested? 2) Are all major components included? 3) Do the tests reflect the system operating documents? 4) Do the tests make sense? etc.

*i. Make changes to FPTs.* This is where corrections, questions answered, and additions made will be implemented by the commissioning authority.

*j. FPT approval.* After the changes are made to the FPTs, they will again be submitted to the commissioning team. When it is acceptable, the customer or his/her designated approval authority should approve the FPTs.

*k. Systems operate.* The FPTs can be implemented as various systems become operative (i.e., test the generator system) or when the entire system is installed. However, the final "pull the plug" test will be performed after all systems are completely installed. If the electrical contractor (or sub-contractor) implements the FPTs, ➤

*(continued from previous page)*

then a witness should initial each step of the test. The electrical contractor should not employ the witness directly or indirectly.

*l.* *Customer receives system*. After all tests are completed (including the "pull the plug" test), the system should be turned over to the customer.

The cost of commissioning for an electrical system is dependent upon many factors, including the system size, complexity and the level of reliability desired. New building construction, renovation of an existing building, or the modernization of one also will affect the cost of commissioning. Experience has shown that the initial commissioning cost is more than offset by increased system reliability and reduced operating costs.

The cost for commissioning a new building can range from 0.5 to 1.5 percent of the total construction cost as shown in the table below. For an existing building, the commissioning costs can range from 3 to 5 percent of the total operating costs.

**Costs of Commissioning, New Construction**

| Commissioning Scope | Cost |
|---|---|
| Entire building (HVAC, Controls, Electrical, Mechanical) Commissioning | 0.5-1.5% of total construction cost |
| HVAC and Automated Control System Commissioning | 1.5-2.5% of mechanical system cost |
| Electrical Systems Commissioning | 1.0-1.5% of electrical system cost |
| Energy Efficiency Measures Commissioning | $0.23-0.28 per square foot |

*Source: Portland Energy Conservation Incorporated/Building Commissioning Guide, US Department of Energy, 30 July 1998*

USACE's Power Reliability Enhancement Program managers are currently developing a technical manual, TM-5-694, on C4ISR Facilities to be published in early FY03. The manual will provide guidance to engineering managers/planners for the electrical systems at C4ISR sites. The intent is to propose different procedures that should be considered when commissioning a new electrical system and /or component.

In addition, TM 5-697 on Commissioning of Mechanical Systems at C4ISR Facilities is also being prepared and will also be available in FY03.

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*Ron Mundt is an electrical engineer in the Special Missions Office of the Military Programs Directorate.* **PWD**

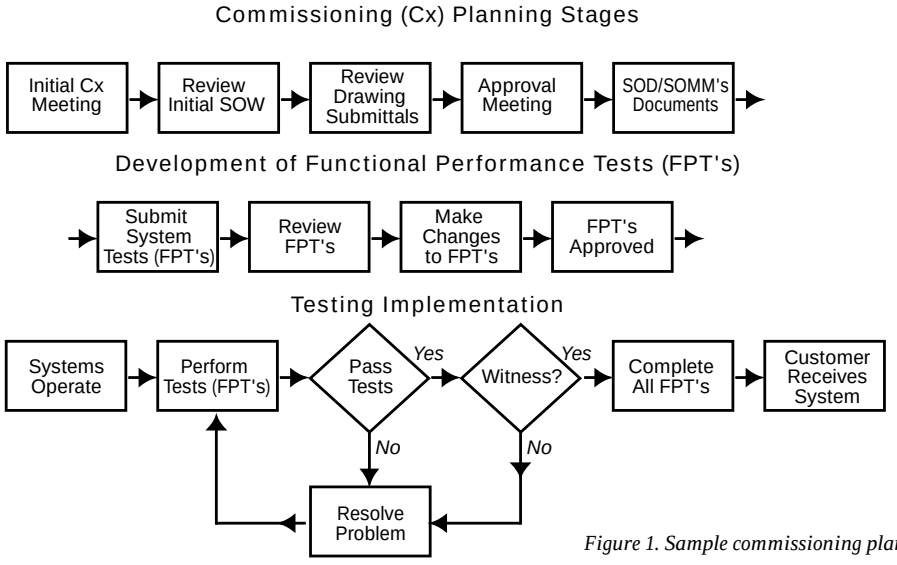


*Figure 1. Sample commissioning plan.*

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# Update: DoD fuel cell demonstrations

*by Franklin H. Holcomb, Michael J. Binder, and Nicholas M. Josefik*

From 1995 through 1997, the United States Department of Defense (DoD) installed a total of thirty United Technologies Corporation (UTC) PC25 Phosphoric Acid Fuel Cell (PAFC) power plants (1-Model PC25A, 14-Model PC25B, and 15-Model PC25C) at military sites in the United States. The overall goal of this demonstration program, managed by the U.S. Army Engineer Research and Development Center, Construction Engineering Research Laboratory (ERDC/CERL), was to provide a thorough evaluation of fuel cell performance over a wide range of conditions.

The selected sites are shown in Figure 1. Site selection was based on a combination of various criteria including interest of site personnel, energy cost savings, diversity of electrical and thermal applications, geographic region and climatic diversity, site physical considerations, and environmental considerations.

ERDC/CERL personnel have been monitoring the operational performance of each of the PAFC power plants in the DoD fleet. This includes total operating hours, total electricity production, total waste heat recovery (PC25B sites), cell voltage degradation, availability, efficiency, (estimated) energy cost savings, and forced outages.

As part of an FY01 funded demonstration program, residential-sized (3 kW – 5 kW) Proton Exchange Membrane (PEM) fuel cells are being installed at military sites in the United States. A Broad Agency Announcement (BAA) solicitation was prepared which resulted in six contracts being awarded representing nine sites and a total of twenty-one fuel cells. The first of these units were installed in January of 2002, and the rest are scheduled for installation in October of 2002.

As with the PAFC program, a turnkey project was requested which included the design, installation, operation and maintenance, performance monitoring, and option for removal. A further requirement was that the fuel cells operate for a period of one year with an availability of at least 90 percent.

Both the PAFC and PEM demonstration sites are fully documented and available for viewing at the DoD ERDC Fuel Cell Website at http://www.dodfuelcell.com/.

*For more information, please contact Frank Holcomb at 217-352-6511, EXT 7412, e-mail: f-holcomb@cecer.army.mil.*

*Franklin Holcomb, Michael Binder, and Nicholas Josefik are researchers in the Energy Branch of ERDC/CERL's Facilities Division.*

PWD

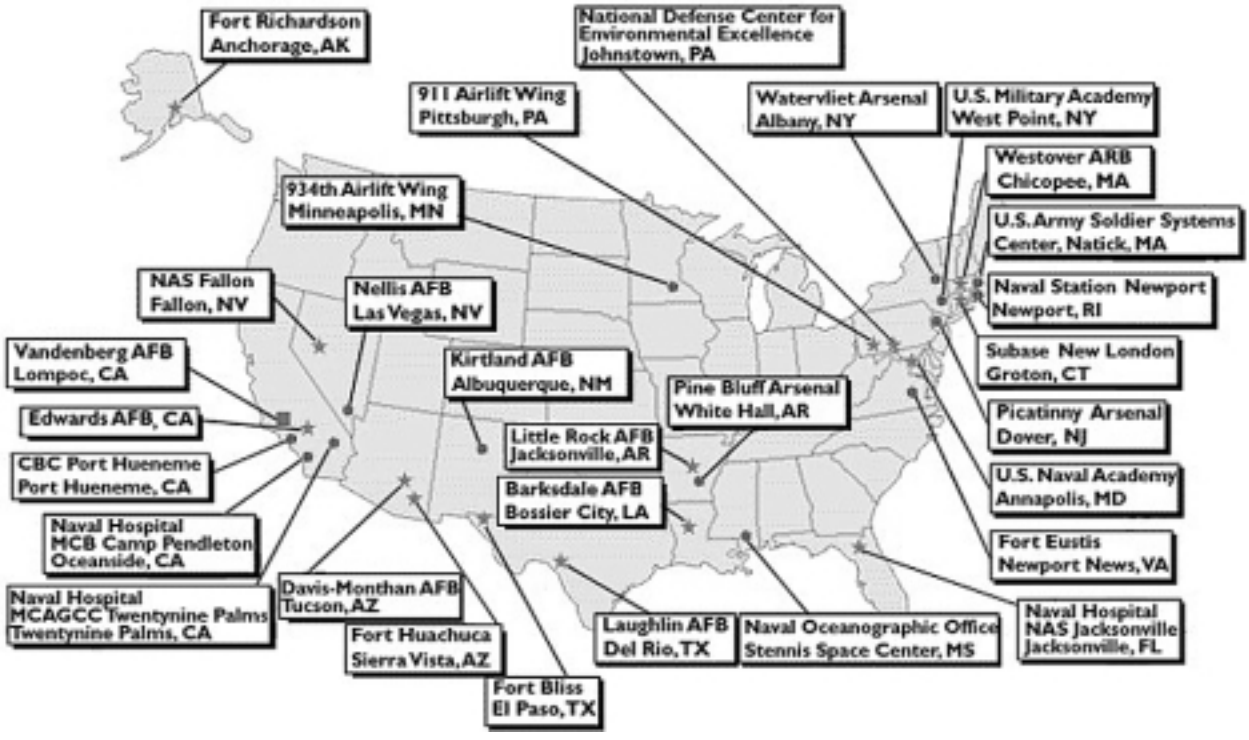


*Figure 1, DoD PAFC Sites*

# APG's innovative energy conservation ideas win top awards

This year, Aberdeen Proving Ground won not only the Secretary of the Army Energy and Water Management award for an active installation in the category of Alternate Financing, but will soon receive a Federal Energy and Water Management (FEMP) Award from the Department of Energy for energy efficiency and energy management as well as one for its energy manager, Gary Testerman.

Utilities for the post's *2,065 buildings (14.8 million SF)* consist of *2.2 million linear feet* (LF) of electric distribution, 54 electrical substations, two water plants *(7,000,000 gallons per day capacity)*, two sewage disposal systems *(4,000,000 gallons per day capacity)*, *20,735 LF* of gas line, *210,400 LF* of steam and hot water distribution, 30 central boiler plants, *1,300* individual heating systems, and over *30,000 tons* of air conditioning.

Through the Department of Energy's FEMP National Geothermal Heat Pump SUPER ESPC Contract, APG awarded a delivery order for $5.7 million to install 643 geothermal heat pumps in the post's family housing facilities. The contract also includes a 20-year service agreement, estimated at $4 million. All costs are paid from the savings over the 20-year performance period.

APG can expect to have annual financial savings of approximately $600,000 and savings of over 8,600,000-kilowatt hours of energy per year. Reduced emissions resulting from this project are equivalent to 785, 000 gallons of gasoline saved per year.

CESource, one of five companies selected by the Department of Energy to manage a national geothermal energy-savings retrofit program for federal facilities, preformed the work and will provide the operation, maintenance, measurement and verification of savings and unit replacements as required. CESource, as a subcontractor to the local utility company (Baltimore Gas and Electric Company), has also provided the audits, studies and accomplishment of the other ECMs.

BGE and APG have been active partners for the electric distribution needs of both parties for over fifty years. The partnership grew into a Demand Side Management and Energy Conservation effort in 1995. The partnership, over these seven years, completed projects that will save the government $39.4 million over the life of the projects. Two more projects are ready for contracting in FY02 and will add $84 million to this total if accomplished.

The main project for FY02 is the Distributed Generation Project that will provide onsite generation to mitigate deregulated electric price volatility (i.e., to off-set high electric prices in the Peak Demand Periods). This project also provides APG with additional security and reliability of power by allowing APG to perform its mission independent from the utilities electric and natural gas grids. The feasibility study has been completed and indicates a conservative savings estimate of $4M per year.

APG's utility company partnering has been extremely successful. Baltimore Gas and Electric Company provides expertise, manpower, ease of procurement, quick and accurate designs, and high standards of workmanship. BGE competitively bids all of their work to contractors that are on their pre-qualified list. These contractors perform to high levels of professional standards and are motivated to deliver the best possible product to maintain their standing with the utility company.

Project ACE is an innovative program that APG uses to promote energy conservation. In addition to news articles, e-mail and web base information distribution, Project ACE promotes a program of facilities shut down during non-use periods. Many APG employees use the same alternate work schedule allowing many buildings to be shut down on a three-day weekend every other week.

Employees are also encouraged to schedule a day of leave in conjunction with each holiday that falls on Monday or Friday allowing for a four day shut down for 6 holidays and a week-plus shutdown for Christmas and New Year's. This program is saving APG $750,000 per year.

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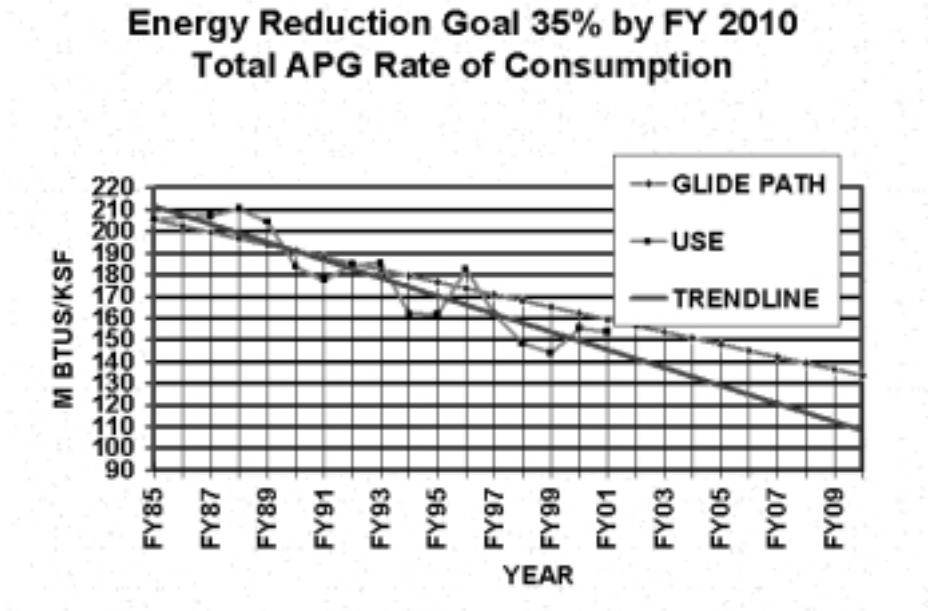

# TIM headquarters to open doors in October

*by SSGT Marcia Triggs*

A centralized agency designed to manage Army installations and fence funds for soldiers and their families will open its headquarters October 1 in Arlington, Virginia.

The Installation Management Agency (IMA) will execute the concepts outlined by Army Secretary Thomas White when he pledged last year that the service would implement better business practices, said Philip E. Sakowitz, Jr., the new agency's deputy director. Sakowitz has spearheaded the Transformation of Installation Management (TIM) task force since March.

TIM has evolved into more than cutting layers of bureaucracy, Sakowitz said. It will change the make-up of the Army. He said the Army's plan is to reduce military personnel in garrison.

"The only positions we can say for sure will remain is the garrison commander and command sergeant major," Sakowitz said, inferring other garrison positions will be filled by civilians.

IMA has also become a mechanism for making sure the Army is taking care of its personnel, and running to standard, Sakowitz said.

The purpose of the agency is to make sure funds are funneled into programs to which it is allocated. Funding for an installation will be separated into two different pots, and no longer will it migrate between mission and base operations. The outcome is expected to be soldiers better trained for mission, improvement in well-being programs, and better workplace and living conditions on post, Sakowitz said.

Installation management will also be held accountable to a standard, he added.

"All soldiers have a standard operating procedure for doing their job — the Army didn't have one," Sakowitz said. "We hadn't been training to any standards in installation management. However, we have 95 base-operation services, examples are: child-care centers, dining facilities and gyms. We're going to write an SOP for all of them."

As an example of consistent base operations throughout the Army, Sakowitz talked about gym improvements. Plans are currently being written to have all gyms in operation for 90 hours a week, he said. The square footage of the gym will be based on the installation's population and all programs run by the gym, such as intramural teams, will also be under the same guidelines.

Change will not happen overnight, Sakowitz said. It will take about a year before all the standard operating procedures will be written. The headquarters staff will only be 40 percent staffed in October, and fully staffed sometime in 2003.

Soldiers will start to see upgrades in their living quarters and where they work in fiscal year 2003, but most changes won't take place until the 2004-2005 timeframe, Sakowitz said.

There are a number of changes the Army will undergo under TIM, and one will be the elimination of borrowed military personnel, Sakowitz said.

"Soldiers who work at the gym and basic trainees who pull KP [kitchen-patrol] duty are examples of borrowed military personnel," Sakowitz said. "Most of the time we don't have the funds to man those facilities, so we pull soldiers out of training."

The IMA will be run by MG Andy Aadland, formerly the commanding general for the Maneuver Support Center, Fort Leonard Wood, Missouri. He will also head up the seven IMA regions. The regions headquarters will be located at Fort Monroe, Virginia; Fort McPherson, Georgia; Rock Island Arsenal, Illinois; Fort Sam Houston, Texas; Heidelberg, Germany; Fort Shafter, Hawaii, and Yongsan, Korea.

"There are a lot of people who are confused by the IMA regions, Sakowitz said. "They think that we are going from 14 major commands to seven regions. We're going from 14 to one. It's not central unless you go to one."

The MACOMS - such as Forces Command and Training and Doctrine Command - will no longer be the sole management authority for installations.

MACOM commanders will still be engaged in installation matters, as six of the commanders will represent all MACOMS and sit on a newly established installation management board of directors, Sakowitz said. However, the MACOM commanders will not be involved in day-to-day operations, he said.

"I believe in my heart this is good for the Army," Sakowitz said.

Not only will IMA be taking care of people, managing all installations under one umbrella will enable the Army to capitalize on bulk purchasing to save money.

In a speech, Secretary White said that the Army has 300-plus separate contracts with Microsoft, Sakowitz related. That's an inefficient use of money. In the future, one contractor could serve all the Army's state or regional supply and utility needs," he explained, "and the money saved can go back into well-being programs for the community."

Just as Transformation on the tactical side is developing in stages, TIM will change the Army at a slow but steady pace, Sakowitz said.

*SSGT Marcia Triggs writes for the Army Public Affairs Office at the Pentagon.* PWD

# Reserve Complex becomes a reality for Metro-Atlanta's Reserves

*by Ron Morton*

From the graves of old buildings, new ones are rising. Located on the west side of post, what was once a part of Fort Gillem's warehouse district, now sits a new Army Reserve Complex, at an estimated cost of $22.5 million.

When finished, the complex will have 178,350 square feet of space and contain five buildings— a 1,600-person Army Reserve Center, a medical warehouse, a maintenance storage facility, a vehicle maintenance shop, and a supply storage building.

Construction on the complex started July of this past year with the Reserve Center building, but "The medical warehouse will probability be the first building turned over to the Reserves," said Jay Wilson, Fort McPherson resident engineer, Savannah District.

The Louisville District Corps of Engineers contracted for the design and construction of the complex, then transferred both to the Savannah District, which is responsible for the construction management. Wilson said, "My mission is to ensure that construction stays on course, time wise, and coordinate any problems or road closings due to construction with Fort Gillem personnel."

A completion date for the entire complex has not been set, but June 2003 is the completion date for three of the buildings. Wilson said they only received funding for the Reserve Center, medical warehouse, an enclosed wash rack, and an unheated storage area. "Funds for the Army Reserve vehicle maintenance shop and the supply storage building were reprogrammed to 2003 and 2004," Wilson explained.

The new complex will be utilized by "reservists of the greater Metro-Atlanta area," said CPT Charles Jackson, engineer plans officer, 81st Regional Support Command, Birmingham, Alabama.

The old Reserve Center will be revitalized and integrated into the new complex.

The west end of Fort Gillem has seen many of the old WW II buildings give way to new modern buildings that "will adhere to an architectural style and look that will bring a sense of harmony and cohesiveness to the installation," said Jack Schupp, deputy director, Installation Support Service Center.

Also pending construction at the West end is the new Criminal Investigation Laboratory and Expositive Ordnance Battalion facilities. The construction of the new Criminal Investigation Laboratory will start in late summer or early Fall 2002 at a cost of $29 million. The Expositive Ordnance Battalion facilities will be designed in late fall 2002 with early spring construction in 2003.

Also planned for the west end is a new entry road configuration, guardhouse, and Military Police station for registration and administration said Schupp.

*Construction of the Reserve Center Complex looking west on Hood Avenue toward Jonesboro Road.*

*POC is Jay Wilson, Savannah District, Corps of Engineers, (404) 464-4768.*

*Ron Morton is a media relations officer in the Garrison Public Affairs Office, Fort McPherson, Georgia.* PWD

# Fort Drum workforce pulls together for President's visit

*by Karen J. Freeman*

The concept of "teamwork" may have never played such a vital role in the success of an action plan, as it did one week in July during which Fort Drum prepared for a visit by the President of the United States.

Fort Drum's "team" was comprised of three very different workforces: Public Works (PW) federal employees, a construction contractor with several sub-contractors and soldiers from four battalions of Fort Drum's 10th Division Support Command (DISCOM). The key players from each organization were pulled together on a Monday morning and informed of their task— preparing for a visit to four Fort Drum facilities and a public address by President George W. Bush on Friday of that same week.

At a minimum, Fort Drum needed to convert a wide, open field into a secure presidential address site consisting of a 106-foot long by 48-foot wide grandstand, speaking platform, walkway, media tower and seating sections for the media, visitors, civilian employees and military personnel. Additionally, the motorcade routes had to be beautified, an indoor location readied as an alternate site, and the other four site visit facilities prepped. All projects took place under the watchful eye and expert guidance of a White House staff leader and head of the Presidential Protection Division of the Secret Service.

With less than four days to complete the task, no time was wasted. By mid-afternoon Gordon Greene, chief of Fort Drum's Job Order Contract (JOC) Division of Public Works had assembled 57 employees of his primary contractor, Beneco Enterprises, and seven local sub-contractors. At 4:00 pm, the crew began installing piers for the 468-seat grandstand and speaking platform at Division Hill, site of the public address. Beneco Enterprises and its subcontractors would ultimately be responsible for constructing all viewing, band and media stands, walkways and the media tower, painting, trenching for the installation of the communication lines and installing electrical power.

At the same time, Tom Ferguson, chief of the Operations & Maintenance (O&M) Division of Public Works, had gathered nearly 120 craftsmen from his workforce.

Electricians from PW's Utilities Branch ran a new primary power line and transformer to Division Hill to support all electronic communications, lighting and sound systems needs. Crews from the Roads & Grounds Branch mowed lawns, swept streets along multiple motorcade routes, patched parking lots and laid down gravel pads for tents that would be raised on Division Hill. Refuse workers placed dumpsters and trash bins in specific locations identified by the Secret Service. Carpenters replaced handrails, fixed doors and performed general maintenance to buildings on Division Hill as well as to other facilities along the president's route. Craftsmen from the Paint Shop touched up buildings and roads weathered from the harsh winter. Sign Shop artists created wooden signs and vinyl banners, some as large as 15-foot wide by 20-foot high, for facilities on the president's tour of Fort Drum.

"We keep the post clean and sharp on a day-to-day basis," said Roger Stock, supervisor of the Roads & Grounds Branch. "However for such an important occasion, we wanted to make sure Fort Drum was looking good 'above and beyond.'"

On the military side, DISCOM Sergeant Major Huiberto Oakes organized 225 soldiers from the 710th Main Support Battalion (MSB), 548th Corps Support Battalion (CSB) and the 10th and 210th Forward Support Battalions (FSBs). Per White House directives, DISCOM was to support and coordinate control of preparing the Division Hill site by providing manpower, equipment and local security. Soldiers raised fences along the perimeter, brought in cranes to hang the 10th Mountain Division banner, provided flatbed trailers for the soldiers and raised tents for the press and communications equipment.

Crews worked around the clock and by Tuesday afternoon, cohesiveness among the three workforces became more evident as the distinctions between them began to fade. DISCOM soldiers from the 710th MSB pitched in to help the construction contractors. When the electric sub-contractor became overwhelmed by demands from the White House staff late in the week, Greene made one call to Public Works O&M and in minutes, electricians from Public Works' Utilities Branch arrived to lend a hand.

The cooperation is especially significant since Fort Drum recently underwent an A-76 Commercial Activities study and, after a grueling 4-year process, won the bid to keep Public Works activities in-house. Fort Drum's MEO (Most Efficient Organization) was implemented in January of this year. The collaborative effort between the MEO and support contractors is a great complement to Fort Drum's new Public Works organization.

"The culture change required to move an organization toward viewing a contractor as a partner rather than as a ➤

*President Bush addresses troops at Fort Drum.*

# Centers offer *specialized* expertise

The U.S. Army Corps of Engineers (USACE) maintains centers of expertise in a wide range of technical fields and support areas, such as specialized military and civil works engineering issues, real estate support, information management, environmental issues, mapping, and computer-aided design and development (CADD). These centers were created primarily to provide support to all USACE elements, specifically our districts, but they are also available to provide assistance to any Federal or State agency on a reimbursable basis.

The centers of expertise are authorized, maintained, and controlled by ER 1110-1-8158, *Corps-Wide Centers of Expertise Program*, which was published in January 1998. This Engineering Regulation provides guidance for creating and periodically re-certifying all centers under its purview. The regulation helps assure that these centers are staffed by subject matter experts, and are re-certified every 2 to 3 years to verify their continued viability.

The centers of expertise program encompasses two types of centers - Mandatory Centers of Expertise, where certain services are mandatory for use by USACE districts, and Directories of Expertise, which are available for voluntary use.

A current list of all centers, both voluntary and mandatory, is maintained on an Internet site. This site provides information on the mission and function of each center, points of contact, and a link to the center's home page for more detailed information. The Center of Expertise homepage is located at:
**http://www.usace.army.mil/inet/functions/cw/cecwe/coexpert/index.htm**

Any given district only gets involved every few years in a project that includes certain specialized engineering fields, such as electronic security, protective design, training ranges, hydroelectric design, and airfield pavement. To remain a viable engineering and construction agency, USACE must maintain an expertise and competence in these and many other engineering and technical areas. However, due to the limited number of projects, every district can not afford to maintain expertise in every engineering discipline. Therefore, the centers of expertise program is essential to maintaining USACE technical expertise in these specialized areas.

The centers of expertise provide unique technical expertise to USACE districts, DPWs, other U.S. and local government agencies, and allow rapid response to emergencies with appropriate technical experts.

For more information on the centers of expertise, please visit the website and feel free to call or e-mail the point of contact at the center or the HQUSACE proponents to learn more about the unique capabilities of these technical experts.

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competitor takes a concentrated effort to achieve," said Greene. "The Public Works workforce, at all levels, has accomplished this change and the benefits are evident in this mission, which could never have been so successful otherwise."

Crews from all workforces continued working straight through until 8:30 a.m. on Friday, July 19, when the site was cleared for a final security sweep by the Secret Service. The changes that took place in 86 hours, on Division Hill and other locations on post, were nothing less than amazing.

All parties agreed teamwork was the most important component of this astounding effort. "If this were a normal action, the contractor would have been given 150 days to complete the job," said Greene. "Instead, it was completed in 3-1/2 days through constant and coordinated efforts."

Working together on such a critical project allowed many to develop newfound respect for others who work on Fort Drum– whether military or civilian, federal employee or contractor. "Many construction workers, both federal and contractor, commented to me how much they enjoyed working alongside the DISCOM soldiers and getting to know them," said Greene. "They were impressed with what these young soldiers do day-in and day-out to protect our country and equally impressed with how they rolled up their sleeves and chipped in wherever needed."

The respect was mutual. "This event just proved to the soldiers and civilians of this great community that we are all one team," said Oakes. "And when called upon, we all definitely have an impact on our success."

"The integrated efforts of our craftsmen, contractors and DISCOM soldiers turned the White House advance team's concepts into reality virtually overnight," summed up Corriveau. "The extraordinary teamwork displayed … demonstrated that we can surmount any challenge by simply combining the special talents and capabilities of one another."

*Karen J. Freeman is a public relations specialist in the Environmental Division, Public Works, Fort Drum, NY.*

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# Omaha District teams with Forest Service and Colorado Fire Department to fight wildfire, develop protocol for fire response

*by Monique Farmer*

A fire that burned in the Chicago Ridge region of Camp Hale in Vail, Colorado, triggered an inter-agency effort to create a protocol for response to wildfires.

Camp Hale is a 247,000-acre Formerly Used Defense Site (FUDS) in the mountains of Colorado. The 10th Mountain Division and the 38th Regimental Combat Team utilized it from 1942 to 1949 for winter and mountain warfare training. From 1959 until 1965, the CIA used portions of the site for training Tibetan guerillas.

On July 7, a lightning strike started a single tree on fire there. It continued to smolder until it was extinguished by firefighters July 10.

"There was a high risk that the fire from the tree could have spread and broke into a full fledged wildfire," says Jerry Hodgson, Corps project manager working at the site. Because the tree was in a previously identified impact area, the U.S. Forest Service and firefighters did not immediately respond to the fire for safety purposes, Hodgson says.

*Teamwork helps extinguish a tree fire at Camp Hale, CO.*

The forest service, the Colorado Department of Public Health and Environment (CDPHE) and the Omaha and St. Louis Districts of the U.S. Army Corps of Engineers were on-site conducting investigations. All agencies worked together to develop a plan to safely and rapidly address the tree fire before it spread.

"The entire state of Colorado has been declared a disaster area due to all of the fires ongoing across the state," Hodgson says. Thus 'let it burn' was not an option."

"We relied on the U.S. Forest Service for fire safety support, logistics and firefighting issues, and we relied on the Corps for Unexploded Ordnance (UXO) safety support," says Jeff Swanson, Camp Hale project manager with CDPHE. Escorting fire safety personnel, the Corps team used ordnance avoidance procedures to sweep a path for the fire crew to safely reach the tree fire, says Hodgson.

"It was a fortunate coincidence that we were already at Camp Hale conducting site investigations," Hodgson says. "Once told of the location of the burning tree, we knew it was near an impact area and that we needed to develop a plan to respond to it, which included ordnance safety protocols in addition to fire fighting safety protocols."

During operations, several pieces of ordnance-related debris were found, including a live, 57 mm high explosive projectile. Members of the 764th Ordnance Company from Fort Carson, Colorado, detonated the projectile.

"The events of that week emphasized the need for providing the Forest Service support in responding to fires within the Camp Hale boundaries due to the potential for encountering unexploded ordnance," says Hodgson. The protocols developed included fire hazard maps for the entire Camp Hale boundaries, fire response guidance plans and ordnance safety training plans for near-term needs and for the future.

An Unexploded Ordnance (UXO) training session was also developed and scheduled for the following week. The training session targeted firefighters, the U.S. Forest Service, local fire and law enforcement agencies and any other personnel who may respond to fires and/or other emergencies in the Camp Hale areas.

Put together within a week's time, the UXO training was presented by the Interstate Technology Regulatory Council (ITRC), the Omaha District and The Shaw Group, corporate sponsor of this year's ITRC UXO Basic Training Course. Topics covered were ordnance recognition and hazards, basic safety concepts and response protocol.

According to Swanson, Camp Hale is the only FUDS in the country that has any type of protocol for fire response.

"I think fire on UXO-contaminated public lands is a major national issue," says Swanson. "Our experience at Camp Hale and recent experience at other sites has raised awareness of the issue. It will now need to be debated and addressed at other sites across the country."

"Safety for firefighters and the public is our number one concern," says Beth Boyst, wilderness specialist with the U.S. Forest Service. "The Corps and the state have been very helpful and proactive in trying to address those needs for Camp Hale."

"The Camp Hale team, including the forest service, CDPHE and the Corps have been working as a team on this project since day one," Hodgson says. The trust and relationship that we built allowed us to effectively team together and address the potential fire this July and to develop protocols for future fire response activities."

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*Monique Farmer is a public affairs assistant with the Omaha District.*

PWD

# Corps helps Moody AFB get Georgia's first nanofiltration water-treatment system

*by Verdelle Lambert*

By the end of this year Moody Air Force Base will have one of the most up-to-date water-treatment plants in the nation and will be the first in Georgia to use a nanofiltration system.

"Moody's drinking water currently meets all Safe Drinking Water Act standards and is safe to drink," said Bill Bryan, chief engineer at Moody AFB. "However, a comprehensive series of tests in 1995 indicated the possibility of a future problem if surface water entered the aquifer through the many limestone sinkholes that exist."

After consulting with Headquarters Air Combat Command, Moody began steps to build a new water-treatment plant that would "meet future requirements that could be out on the horizon," explained Corps Senior Project Manager Tim Corley. One of those requirements— the U.S. Environmental Protection Agency's (EPA) Disinfection/Disinfection By-Product Rule (D/DBPR)— calls for all groundwater supply systems to have a Trihalomethane (THM) concentration of less than 80 mg/l (milligram per liter) in all parts of the distribution system by the end of 2002.

While Trihalomethane is not a household word, chlorine is. Since the early 1960s, most municipal water systems have been using chlorine to disinfect their water supplies and make them safe from bacteria, viruses and parasites. THMs are the most common group of disinfection by-products that are formed when free chlorine reacts with organic compounds found in the source water. EPA has concluded that lowering the THMs in the water will reduce the risk of reproductive and developmental health effects and cancer.

About a year and a half ago, Savannah District contracted with Thomas & Hutton Engineering to design a state-of-the-art water treatment plant for the base.

"The options we were asked to take a look at were the use of alternate disinfectants not known to form THMs, use of powerful oxidants that change the characteristics of the organic material such that THMs will not form upon chlorination, physical removal of the organic precursors from the system, or connecting to the local county water system," said Chris Stovall, director of environmental for Thomas & Hutton.

The contractor set up a pilot system at Moody and tested several water-treatment options, including chloramination, ozonation, conventional filtration, membrane filtration with a nanofilter, and granular-activated carbon (GAC).

During the pilot tests, roughly 40 percent of total THMs were removed from the water with chloramination, 40-50 percent with conventional filtration, about 98 percent using membrane filtration with a nanofilter, and 98-99 percent with GAC.

"Only GAC and nanofiltration consistently achieved the results we needed," explained Stovall. "We compared the life-cycle costs for each, and they were both roughly the same capital cost, but the nanofiltration facility, in the long term, is less expensive to operate."

Cartridges have to be replaced on a fairly consistent basis with GAC, whereas the nanofiltration system is fairly self-sufficient: the membrane— a thin, solid sheet of polymer (plastic) that prevents undesirable chemicals from entering the water supply— will last for many years and has to be cleaned only quarterly or biannually, according to Stovall.

"We were already looking at the future to make sure we could meet the lower limits for THM that EPA will require in 2003, and nanofiltration allows Moody to do that," concluded Stovall.

The centerpiece of the nanofiltration system is the membrane. Water comes through the system under pressure great enough to allow only water molecules to permeate the pores of the polymer while blocking total THMs (organics), salts, solids and metals from entering the distribution system. Water that doesn't make it through the membrane, called concentrate, is roughly 25 to 15 percent of the total water flow. It is discharged into the wastewater plant. Water that makes it through the membrane goes through an aeration tower, where hydrogen sulfide (the rotten-egg smell) is stripped away along with any remaining carbon dioxide.

Thomas & Hutton's design of the 1,050 gallon-per-minute (gpm) nanofiltration membrane process includes new controls for the three existing wells, new well pump motors equipped with variable frequency drives (VFDs), chemical feed systems, and a new air stripping (aeration) tower. The design and permitting (by various regulatory agencies) had to be completed within a five-month time constraint (typical timeframe is 12-18 months) in order to put the project out for bids within the 2001 fiscal year. ➤

*Photo by Jonas Jordan*

*These packed tower aerators remove sulphur gases and odor from the water.*

# Army Range Inventory nears completion of Phase 2

*by Lisa Greenfeld, Paul Dubois and Mary Ellen Maly*

In response to a growing need to satisfy environmental and congressional reporting requirements for unexploded ordnance (UXO) and their munitions constituents (MC), the U.S. Army Environmental Center (USAEC) undertook a comprehensive three-phased inventory of all Army ranges in June, 2000, with completion of the final phase in late 2003.

The inventory is sponsored and executed by the Assistant Chief of Staff for Installation Management (ACSIM) Office of the Director for Environmental Programs (ODEP) in close coordination with the Army G-3, Training Directorate (DAMO-TRS) for the Active and Inactive (AI) portion of the inventory, and with the U.S. Army Corps of Engineers (USACE) for the Closed, Transferred, and Transferring (CTT) and the Formerly Used Defense Site (FUDS) portions of the inventory.

The Range Inventory program is also coordinated with and reported through the Army Range Sustainment Integration Council (ARSIC), a cross-functional committee with representation from every HQDA office involved in training and installation management. The ARSIC approves project scope, execution, coordination, and data management and reporting.

When completed, the inventory will contain a comprehensive and consistent Army-wide inventory showing locations and detailed attributes of every current and former Army range. This will position the Army as the lead within DoD to meet numerous management drivers, including:

Department of Defense Directives 4715.11/12, Environmental and Explosives Safety Management on Department of Defense Active and Inactive Ranges within the United States/Outside the United States

- The Army's Unexploded Ordnance (UXO) Material Weaknesses (pursuant the Chief Financial Officers Act)
- Senate Report 106-50 (SR 106-50)
- The FY02 Defense Appropriation Act
- The Management Guidance for the Defense Environmental Restoration Program.

Additionally, the database will be fundamental in providing support for Army range sustainment initiatives and will serve as a single baseline source of consistent data for Army-wide planning and scoping efforts. This baseline will benefit and enhance integration of training, facilities and environmental management perspectives in the Army.

The USAEC Range and Munitions Division (RAMD) manages the inventory's execution. Phase 1, an electronic survey was completed in December 2000 and provided inputs required to conduct gross-level UXO and MC cleanup cost estimates by DoD and to gain an appreciation of the scope of the follow-on effort. Phase 1 documented "range complexes," where all ranges on installations were lumped by type and very coarse data about each was provided.

Phase 2 was begun in June 2000 to map and document detailed information on all Army AI ranges both CONUS and OCONUS. It will be completed in December 2002.

Phase 3 follows completion of Phase 2 sites and is documenting all CTT and FUDS ranges and munitions disposal sites in the CONUS and U.S. Territories. Phase 3 will be completed in late 2003.

Results from Phases 2 and 3 will be housed in the Army Range Inventory Database (ARID), developed and maintained at the USAEC. Access to and use of the data is managed by RAMD in coordination with ODEP and DAMO-TRS.

For each installation, the ARID stores both the relevant data collected for UXO and MC cleanup cost estimating and reporting and a map image representing the installation boundary, ranges, elevation contours, surface hydrology and roads. ➤

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This tight schedule was further complicated by the fact that the Georgia Environmental Protection Division had never permitted a nanofiltration system before, so Thomas & Hutton, Boyle Engineering [part of the design team], plus the base and the U.S. Army Corps of Engineers had to put forth a significant effort to acquaint the regulatory staff with the design proposal. They met with the regulators in Atlanta on two occasions for this purpose, and when the project is completed the regulators will do a final on-site review.

Harry Pepper & Associates, Inc., was awarded $2.8 million to build the new water treatment facility, which is scheduled for completion Sept. 24.

"We've succeeded in producing better-tasting and safer drinking water in an economical and efficient new water plant," said Lowell Klepper, deputy base civil engineer.

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PWD

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Range information includes demographics, land use restrictions, ownership, munitions, and range types and uses according to Facility Category Codes (FCC).

To ensure data collected are consistent and compatible, Phase 2 and 3 inventories were conducted with support of contract teams. To leverage existing capabilities and data, the G-3 and the ACSIM agreed to use the Integrated Training Area Management (ITAM) Geographic Information System (GIS) Regional Support Centers (RSCs) as the primary executors of the G-3's Army AI Range Inventory. The Army Corps of Engineers coordinated execution of the Phase 3 CTT and FUDS inventories.

Initial lists of potential sites were pulled from the Integrated Facilities System (IFS), Army environmental records, range records, and through coordination with MACOMs. The Phase 2 inventory will document AI ranges on about 500 installations and training sites when completed. Phase 3 will inventory over 430 closed and closing installations and over 1,600 FUDS properties.

Phases 2 and 3 of the inventory focused on gathering existing data and information from all available sources, and verifying and modifying these data based on installation input. Fieldwork included range reconnaissance, verification of data sources, global positioning system (GPS) ground control points, and similar functions.

The AI inventory is being conducted under a 7-quarter timeline, beginning each quarter with a notification from DAMO-TRS to MACOM range offices identifying the sites to be inventoried and requesting preliminary data including IFS records, maps, plans, and other records. Inventory teams evaluate this data, identify shortfalls and coordinate site visits with installation staff. Site visits involve direct coordination with installation Real Property, Range, and Environmental staff to delineate all ranges, depict those accurately on GIS maps, and collect all the attributes required to populate the ARID.

Additional spatial data are being collected during Phase 2, where available, to develop a standard GIS dataset for each installation. These layers include soils, vegetation, and special concern areas such as endangered species and cultural resources.

Forty-five days after the inventory site visit the AI, teams provide AEC with a set of draft binders containing all the range maps, ARID tables, and some summary information. This is staffed to MACOM and installation range POCs for coordination and review, and returned to AEC 45 days later. Comments and corrections are provided to the AI teams, and a final binder is provided 30 days later, and the entire process begins again the next quarter for the new sites.

The AI teams have just completed the 7th and final quarter of inventories and are in the process of completing revisions. Final binders are to be sent by mid-November. When completed, the AI inventory is expected to document and map over 10,000 AI ranges at some 500 installations and sites.

Execution of Phase 3 inventories follows the completion and receipt of Phase 2 results.This avoids a duplication of effort by the CTT inventory teams as they use the AI data as a baseline for delineation of potential CTT sites. The Phase 3 CTT inventory began in October 2001 and will continue through 2003.

Phase 3 inventories will also gather information on UXO and discarded military munitions disposal sites. Three USACE Districts (Baltimore, Omaha and Sacramento) are performing the inventories, and following staffing and execution procedures and timelines similar to the Phase 2 process. The Corps' FUDS Program is collecting all range data related to FUDS properties. A 3-year program is underway to evaluate the more than 1,600 FUDS properties.

To ensure the AI range records remain current for UXO liability and range sustainment support, the Army Director of Environmental Programs authorized continued support and updates to the inventory. This will ensure that each site with AI ranges is updated at least every 5 years by centrally funded and managed contract support teams.

This work will begin in FY03, and is being scoped and coordinated through the ARSIC. The AEC will continue oversight and management of the project execution in coordination with the Army G-3 and ODEP. Continued updating of the Phase 3 information will occur via the Army Environmental Restoration Program. A major goal of the sustainment effort will be to improve the fidelity of range data in the IFS that remains the Army's real property database of record. Completion of the Army AI and CTT inventories will provide the Army an unprecedented capability to respond to environmental regulatory pressures, DoD reporting requirements, and Army sustainable range management objectives. To obtain additional information on these programs, please contact the USAEC Range and Munitions Division.

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*Lisa Greenfeld is a contractor with CALIBRE Services, Inc., and Paul Dubois and Mary Ellen Maly work in the Range and Munitions Division, U.S. Army Environmental Center.*

PWD

# Matching 1391 project number and 4283 job order serial number simplifies tracking, saves time

*by Bill Genova*

*Bill Genova*

An idea used with great success since 1995 at the 6th Area Support Group DPW in Stuttgart, Germany, is to match the DoD Form 1391 processor's 5-digit generated project number (PN) to the serial number contained in XFA Transaction, Blocks 7-11 of the DA Form 4283, job order request.

Sometimes, 4283s precede the preparation of a 1391; however, often the 1391 is prepared prior to the 4283 due to time constraints or other compelling reasons. In cases where the 4283 preceded the 1391, we ensured that the 4283 serial number matched the 1391 project number. In cases where the 1391 preceded the 4283, we entered the 4283's serial number to match the 1391 project number.

Currently, the 1391 processor is generating project numbers around "59300." Since our Engineer Work Management Division uses serial numbers for logging-in projects in the 00001 to 01500 range, there is no overlap when entering the 1391 five-digit project number into the Integrated Facilities System (IFS) as the 4283 serial number.

To complete the rest of the 4283, Blocks 5 and 6 must contain the user's ID or the DPW's ID, when no user ID has been established in cases such as stationing, installation-wide projects, or special interest construction. The fiscal year, Block 12, is the fiscal year in which the 1391 is created.

An example is the construction of a Special Operations Command (SOC) Forward Stationing Complex. If the 1391 project number is 53520 (the 1391 was first prepared in FY 99), then the 4283 serial number becomes N1-53520-9P. The DPW (Requestor ID =N1) submitted the 4283 for the unit.

Another example is the Non-Appropriated Fund (NAF) Major Construction of an Auto Skills Center under PN 58025, covered under PN DC-58025-2P. The local Directorate of Community Activities (DCA) NAF personnel (Requestor ID=DC) submitted this project in FY 02.

Yet another example is a Whole Neighborhood Renovation (WNR) project for four buildings in Family Housing, under PN 59003, covered by project number HF-59003-2P. DPW Family Housing submitted this project in FY 02 (Requestor ID = HF).

Using the same "serial" number on the 4283 as the 1391 makes it easier for EP&S/Housing/users to track projects in databases. It's also a lot simpler when 1391s need to be prepared "after hours" for a short USAREUR/DA suspense that immediately requires a DPW project number.

Perhaps your installation should consider matching a 4283's serial number in IFS to a 1391's project number. There are already so many numbers and labels being placed on projects. Why add another one if it is so simple to make the numbers match?

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*Bill Genova is currently assigned to the DPW Special Projects Office, 6th ASG, Stuttgart, Germany.* PWD

# Implementing SCP 14-01

Has the IFS System administrator at your installation loaded System Change Package (SCP) 14-01? There are a number of important features introduced with this change package, with compliance with DODI 4165.14 "Inventory of Real Property" being the most critical.

The Office of the Assistant Chief of Staff for Installation Management (OACSIM) transmitted technical instructions that explain the new data entry screens on 10 July 2002. These instructions are also available in the July/August Public Works Digest and on the ISD website Planning and Real Property Library at <http://www.hq.usace.army.mil/isd/librarie/RP/rp.htm>

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# REEP Version 5.2 released

*by Eileen Westervelt*

Army installation energy managers can get help deciding where to focus their conservation efforts and meet their facilities audit requirement with newly updated REEP (Renewables and Energy Efficiency Planning) software. Version 5.2 was released by the Engineer Research and Development Center's Construction Engineering Research Laboratory (CERL) on the Strategic Energy Planning website: http://www.cecer.army.mil/SEP.

If it's been awhile since you've looked at REEP, it's time to look again. The latest version has a friendlier graphical interface, which uses fill-in forms and has more online help, ESPC and ECIP economic criteria, parametric analysis capabilities, and the ability to save reports in assorted formats.

The REEP program is one of CERL's Integrated Strategic Energy Planning tools for screening and prioritizing energy and water conservation projects in DoD on an installation, multi-installation, or national level. REEP takes a "big picture" approach to steering overall efforts by identifying promising technologies, fuels, and funding mechanisms that merit further investigation; estimating savings targets and magnitude of investment; and identifying when technologies that were not viable in the past should be reconsidered in light of changing conditions.

REEP identifies promising technology areas and prioritizes projects based on user-selected criteria such as minimum time to payback, minimum first cost, maximum return on investment, or maximum resource savings. It also helps resource managers identify where they should concentrate their engineering efforts.

REEP evaluates 104 energy and water efficiency projects for their resource savings potential, financial viability, and pollution abatement potential. The database contains over 200 entries of site-specific information for each of 210 DoD installations, describing climate, infrastructure and utilities. This information comes from databases such as HQRADDS and HQEIS, the old Red Book entries, and installation personnel.

The financial analysis uses life-cycle costing methods and allows selection of ECIP and ESPC economic filters. REEP requires no input; however, the user can modify most default inputs. REEP allows parametric analyses, which generate tables of output data based on variable fuel and project costs. It provides a variety of both detailed and summarized report formats.

When input data are fine-tuned to reflect actual site conditions, REEP analyses meet DoD requirements for prioritization surveys and preliminary energy audits to comply with the Executive Order 13123 to audit 10 percent of facilities annually according to the *DoD Energy Manager's Handbook*. This capability could be of significant value to installations and could be the key to productive interactions resulting in the fine-tuning of the input data.

If learning to use yet another software requires more time than you have, CERL engineers are available on a reimbursable basis to work with you on gathering the information and generating the reports.

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*Eileen Westervelt is a researcher in CERL's Facilities Energy Branch.* PWD

*Site energy audit data can fine-tune REEP analyses.*

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# A record turnout for 2002 CP-18 Workshop

*by Ed Gauvreau and Alexandra K. Stakhiv*

Another army recently invaded Williamsburg, Virginia. Its objective was not the last stand against the Redcoats; rather, it was to gain knowledge in "Developing the Capable Workforce" for the 21st-century Army engineer leadership.

Thus began the largest gathering of engineering career program managers in the Army to date. Over 125 participants attended the CP-18 Career Program Managers Workshop on August 27-29, representing 7 MACOMS, 10 individual installations and all USACE elements.

As the Functional Chief's Representative William A. Brown, Sr., Deputy Director of Military Programs, USACE, welcomed the attendees with his perspective of CP-18. "The Department of the Army Intern program is a roaring success, with all 119 slots filled and more people wanting to join the program," said Brown. "Approximately 43 slots will become available in October."

While there are many successes, there is still much to accomplish. The goal is to get students interested in government service early on, while they're still in college. The major challenges facing CP-18, according to Brown, will be to gain additional DA intern slots, increase training funding, include civil works-funded personnel under CP-18, and to track new DA initiatives to centrally manage the civilian workforce.

Kristine Allaman, Chief of the Installation Support Division at HQUSACE, provided an overview of the Army's Transformation Installation Management (TIM) initiative. TIM will centrally manage base operations and maintenance from HQDA through seven regional offices, and fence funds for exclusive use on facilities operations and maintenance.

Allaman included the most recent information on the standup of the new Installation Management Activity (IMA) and the regional offices. She introduced Hugh Exton, who attended the workshop, as the newly appointed Director of the IMA Southwest Region to be based at Fort Sam Houston, Texas.

"The Army is looking at our superstructure with everyone pulling together," said Allaman. The crucial elements for the engineer community are to engage the IMA and work cooperatively to develop effective solutions for the installations to maintain and upgrade their facilities and infrastructure.

The IMA Headquarters will consist of 293 personnel. Very few of them will be technical people. The career implication of this is that facilities management will require a greater skill set including interpersonal, business background, management and leadership competencies, communications, and focussing on the "big picture," Allaman concluded.

Executive Secretary of CP-18 Beryl Dixon discussed the Competitive Professional Development program, which provides central funding for university courses or specific technical training to increase one's expertise and value to the Army. Only employees occupying military-funded positions are eligible, she said. The application deadline for this program is 31 January 2003 for the FY03-04 program.

Ray Navidi of the Engineering & Construction Division, HQUSACE, explained the current efforts on "Competitive Sourcing," required by the Office of Management and Budget, to determine which positions could be outsourced to the private sector. "USACE has calculated that only 20% of its current positions should be considered for outsourcing," he said. "The existing organizational structure of USACE will stay the same. We can anticipate extensive discussions with OMB and Congress on that subject."

Dr. Susan Duncan, Director of Human Resources, HQUSACE, discussed "Strategic Management of Human Capital," explaining the various reports and initiatives being submitted to OPM and OMB to align the Administration's goals with the USACE Campaign Plan and initiatives.

Workshop participants got an update on the on the CP-18 Leadership Development Program (LDP) from program manager Ed Gauvreau. With 100 ➤

*Intern Haley Elrod and Brandon Cockrell presented Fort Benning's successful intern program.*

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graduates in the program so far, Gauvreau challenged the attendees to improve the program and look to its graduates as future Army leaders. "We're not saying you have to hire them, just give LDP graduates the chance to interview and prove themselves," he said.

Dwight Beranek, Chief of Engineering and Construction Division, HQUSACE, presented an overview of the new Facilities Engineering Acquisition Career Field. This DoD initiative will establish training and education standards for positions dealing with the acquisition of facilities and infrastructure. It will include both military and civil funded positions but not military officers. More information on the program is located at http://www.fecf.org/sp2/.

HQUSACE's Milt Elder and John Shearer concluded the workshop's first day with their presentations on the newly implemented CP-18 web site (http://www.hq.usace.army.mil/cemp/cp18/index.htm). Elder presented the history and goals of the site, including Section 508 compliance. He also gave a real-time demonstration of the site content and tools to help employees, supervisors and career program managers. Shearer discussed the environmental career track content, as well as proposed future changes to give the environmental professionals within CP-18 the tools they need for career advancement.

The varied roles of career program managers as counselor, professional developer, and mentor in successfully developing their workforce were laid out by Linda Garvin, Director of Real Estate, HQUSACE. "Most people want and need more counseling," she said. "We can and should use training as a mentoring tool. No one can argue with continual improvement."

"The composition of CP 18 careerists closely mirrors the civilian workforce in diversity at the moment," said John Sellmansburger of HQUSACE EEO. "Keep in mind, however, that selection is not the right time to think of changing race and gender diversity statistics," he continued. "We need to do that well before— during the recruitment stage."

*Bill Sorrentino, Lil Gravatt and Mohan Singh provided an overview of NAD initiatives.*

"We have decentralized recruitment in the selection process, which has improved diversity," continued Dr. Duncan, talking about current Human Resources initiatives at HQUSACE. "The best advice I can give is to start developing leaders at all levels," she continued, "and develop a learning culture within your organizations. You need to start recruiting students in January, not in June after they graduate!"

John Hall of Nashville District said they do just that with their highly successful Student Cooperative Education Program with Tennessee State University, a historically black college in Nashville. The partnering agreement, aimed at encouraging entrance into engineering fields, was signed in 1997. The 13 provisions allow District employees to serve as advisors on student projects, mentor, and conduct field trips.

The luncheon featured MG Hans VanWinkle, Deputy Commanding General, USACE, as the keynote speaker. MG VanWinkle gave an overview of current world events and how they will affect the Army and the engineer community. He encouraged all engineers to continually improve and be ready to address the nation's present and future needs through Homeland Defense and Transformation.

"We as senior leaders have to embrace and accommodate change, set the standard and make it work for us," he said. "With tele-engineering, we don't need to bring experts on-site anymore. The challenge is different from the past, where we had land wars. Technology will now play a lead role in the future. But can we develop the expertise to respond to these challenges? We need to step up to the plate," he urged.

Wednesday afternoon's sessions featured three organizations giving their program overviews and tools to help the engineer community. Brandon Cockrell of Fort Benning, Georgia, presented the intern program they use for the CP-16 community in their area of responsibility. "Our interns have always been heavily involved in construction, facility design simulation, and master planning," he began. "In 16 years, we've had 22 interns. Our philosophy is to give them cradle-to-grave manage- ➤

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ment responsibility for a whole project. This ingrains loyalty and it graduates leaders. The more you invest in an intern, the greater your benefit," concluded Cockrell.

Hailing the program, Haley Elrod, one of Cockrell's current interns, said, "It gave me a chance to get two years of realistic project experience. On-site training is personality training. It sharpens your engineering and personal skills, and it teaches assertiveness techniques."

Dwight Burns added that "interns and coops are your best recruiters. We need to adapt to a tough market during a bad economy. The bad private sector market helps because there is a renewed emphasis on public service after 9/11 and strong desire to return to basics."

Burns led several presentations by the Corps' Northwestern Division, including their initiative with Native American engineers encouraging careers in engineering and science and a computerized resume skills set presented by Rick Moshier and Susan Smith-Anderson of Seattle District.

"Seattle has not used the selection process and self nominations since 1997," said Moshier. Their experience with the Western CPOC has taught them that the wave of the future is that no job announcements will be made, but resumes will be extracted from a central database with the particular skills required for the job.

"It is important that all careerists get their resumes out in the RESUMIX system," advised Smith-Anderson. "Make sure they include the skills of their positions, not just their accomplishments."

The final group of presentations was led by Mohan Singh of North Atlantic Division, giving an overview of NAD's missions and initiatives. John Kerkowski followed with a presentation on the Regional Technical Expert Program being implemented in NAD and other Corps Divisions to develop senior technical experts in their fields as Corps-wide and Army-wide assets. Lil Gravatt presented NAD's new Executive Leadership Development Program, with the first four participants slated to start this October.

Bill Sorrentino of Norfolk District concluded the program with a stirring account of his district's local intern program, with the summary comment by one intern "I'm having the time of my life!" the signature selling point of the program. "Don't forget," he reminded the managers in attendance, "it's most likely an intern who will be replacing you, not your deputy."

The conference concluded Thursday morning with a joint presentation by Mr. Brown and Dr. Duncan on the Strategic Army Workforce initiative, proposed by HQDA to centrally manage, select and assign the GS-12 to Senior Executive Service civilian workforce. This proposal has not been briefed to all the MACOMs, so it is not final. USACE has already expressed its concerns about the proposal and its potential effects on the civilian workforce across the Army.

A town hall discussion led by a panel consisting of Mr. Brown, Ms. Garvin and Dr. Duncan was last on the agenda. Participants took this opportunity to air their views and ask questions specific to their installations and MACOMs.

All of the presentations shown during the conference are posted on the CP-18 web site (http://www.hq.usace.army.mil/cemp/cp18/index.htm). The date and location for the 2003 Workshop will be announced by the end of this year.

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*Ed Gauvreau is the assistant to the Deputy Director, Military Programs, and Alexandra K. Stakhiv is the editor of the Public Works Digest.* **PWD**

*Workshop participants listen as Pat Rivers (right), HQ USACE, makes a point.*

# DPW Worldwide Training Workshop - *the DPW event of the year!*

*by David Purcell and Rafael Zayas*

Plan now to join the senior Army leadership in talking about the latest in your business. The Assistant Chief of Staff for Installation Management and the Commander, U.S. Army Corps of Engineers, are sponsoring the 2002 DPW Worldwide Training Workshop to be held 2-5 December 2002, followed by the Regional Engineer Conference on 5-6 December 2002. Both events will be held at the Omni Shoreham Hotel, 2500 Calvert Street, NW, Washington, DC.

This year's workshop is one not to be missed. It will provide key public works professionals and those working in the area of installation support an excellent opportunity to receive and share the latest information and best practices in the DPW service profession.

The workshop is designed primarily for installation Directors of Public Works, their deputies and division chiefs, IMA/Region staff, MACOM engineers, and USACE division and district representatives. It will be geared towards the critical installation operations and functions and how to perform them in the best manner possible.

The theme for this year is "Transforming Installation Management to Support Today's and Tomorrow's Army." General session presentations from senior Army leaders and Congress will cover a variety of topics. The breakout sessions (arranged in tracks format) will cover:

- Transformation of Installation Management.
- Environment.
- Outsourcing and Privatization.
- Public Works & Construction.
- Innovative Practices.

Expert panels addressing your questions about Transformation of Installation Management, Outsourcing and Privatization, and Innovative Strategies. Also, the Department of the Army senior leadership will honor "the best of the best" in the Army DPW business by presenting the DPW Awards of the Year.

Got questions on where your career is headed? There will be an optional Military/CP-18/CP27/CF-29 update working luncheon (sign-up is required) on Wednesday, 4 December.

On Monday, 2 December, there will be displays and informational sessions by associations that offer professional memberships and certification programs in the DPW areas of responsibility. Also included will be a major Trade Exposition with over 60 booths. Attendees will have time to visit the exhibit areas and find out about the latest products and services available to the DPW to help perform their duties during these times of scarce resources.

For government employees, the workshop will cost $150 per person for employees attending the whole workshop, and $75/day/person for employees attending a day or portion of a day. For non-government employees, the attendance cost will be $300.

Early transportation and hotel reservations are recommended because of holiday scheduling. When contacting the OMNI (202-234-0700) please mention the Army DPW Workshop to get the per diem or workshop rate.

We know that installation managers have lots of questions, so lots of information and activities are being prepared for you. Don't miss this opportunity to find out how the Army is transforming installations management!


*For more details about the agenda, general session presentations, panels and specific workshops, please go to www. mhli.org. If you are interested in exhibiting at the workshop, please contact Mona Pearson, Trade Expo Coordinator, Military Housing & Lodging Institute, at (703) 327-0742, e-mail: MHLIadmin@earthlink.net. If you are a professional association interested in presenting your DPW related certification program, please contact David Purcell, ACSIM Coordinator, at (703) 428-7613, e-mail: David.Purcell@hqda.army.mil.*

*David Purcell is the ACSIM Lead Representative and Rafael Zayas is the HQUSACE Lead Representative of the DPW Worldwide Training Workshop Planning Committee.* PWD

# Forts Hood, Rucker pitch in to rewrite PBSA course material

*by Fred Reid and Vernon Shankle*

As Stephen Covey puts it,says, "Synergy is the fruit of thinking win-win and seeking first to understand…. It's not compromise….. It's the creation of third alternatives that are genuinely better than solutions individuals could ever come up with on their own."

In the true spirit of synergy and partnership between installations and the Corps of Engineers, Kathy McPherson of Fort Hood, Texas, and Orrin Israel of Fort Rucker, Alabama, provided exceptional and unique competence and selfless support to the Army during the re-write of training materials for the Performance Based Services Acquisition (PBSA) course. This course reaches students from all across the globe.

Since 1994, the Army's policy has been to use performance-based contracting methods to the maximum extent practicable. A policy memorandum signed April 5, 2000, directed that 50 percent of services acquisitions, measured in both dollars and actions, be performance-based by the year 2005.

The Army places great emphasis on properly trained installation acquisition teams in the areas of market analysis, performance requirements, and the use of Federal Acquisition Regulations Part 12, Commercial Contracting.

An excellent source of this training, tailored specifically for DoD installations, is the U.S. Army Corps of Engineers Professional Development Support Center (PDSC) in Huntsville, Alabama. PDSC is the Center for Learning and Training for the Corps of Engineers, managing and implementing the Proponent-Sponsored Engineer Corps Training (PROSPECT) Program. This course is offered in Huntsville or at individual sites when requested by installations or organizations.

In March 2002, student feedback and evaluation revealed that the training material, previously developed by contract, was in need of revision. PDSC looked at different options, including contracting out the effort.

No immediate funding for updating the course material was available because the course is taught on a reimbursable basis. Additionally, the next class was scheduled for early June 2002. PDSC decided to request assistance from our installations.

One major benefit in using installation personnel for the update was that the course material would be developed from experienced installation perspective and provide real-life examples for practical exercises. A quick search identified Ms. McPherson and Mr. Israel as very experienced and highly qualified in this area, and haveboth had developed aa reputation for assisting other installations with developing performance-based contracts.

From March through June 2002, in addition to their own duties, Ms. McPherson and Mr. Israel labored over the extensive review, and rewrite of the course, including the practical exercises. With the exception of a one-week effort at Huntsville, where they worked late nights and throughout the weekend, this effort was done mainly on their own time, collaborating by telephone and electronic mail. Their knowledge and ability in the development and management of service contracts were key factors for the timely re-write of the course.

Additionally, their contributions rendered a great service to the Army. The course material now reflects the key components of PBSA, i.e., Performance Work Statements, Standards, Remedies, Incentives, and Assessment Plans. The efforts of Ms. McPherson and Mr. Israel will benefit the performance based contracting activities at installations throughout the world.

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*Fred Reid works for the Installation Support Division at Headquarters USACE and Vernon Shankle is an instructor at PDSC in Huntsville.* PWD

Showcase **your** installation

***Would you like to see your installation featured in the Public Works Digest?***

If you have an interesting story to tell, call us at (202) 761-5778 and you may be on our next cover.

# Training opportunities at ISTD

The Installation Support Training Division (ISTD) at Huntsville, Alabama, has vacancies in the following FY03 Training and Career Development Opportunities:

| Course# | Course Title | Dates | Session | Location | Tuition |
|---|---|---|---|---|---|
| 252 | DD 1391 Processor | 04-08 Nov 02 | 03-01 | Huntsville,AL | $850.00 |
| 986 | IFS for Industrial Engrs | 18-22 Nov 02 | 03-02 | Huntsville,AL | $600.00 |
| 980 | DPW Work Reception | 02-06 Dec 02 | 03-01 | Huntsville,AL | $600.00 |
| 150 | Real Prop Skills | 09-13 Dec 02 | 03-01 | Huntsville,AL | $800.00 |
| 975 | SQL for IFS | 06-10 Jan 03 | 03-01 | Huntsville,AL | $600.00 |
| 988 | DPW PWBOC | 13-17 Jan 03 | 03-01 | Huntsville,AL | $625.00 |
| 101 | Econ Analysis (EA) | 13-17 Jan 03 | 03-01 | Huntsville,AL | $1,000.00 |
| 984 | PW IFS Mgmt | 27-31 Jan 03 | 03-01 | Huntsville,AL | $600.00 |

Course Descriptions can be seen at: http://pdsc.usace.army.mil

Additional sessions of any course can be arranged by contacting ISTD, Beverly Carr, 256-895-7432 (DSN: 760-7432).

*For more information about attending these course sessions, please call Sherry Whitaker, 256-895-7425 (DSN: 760-7425) or Tonya Parker, 256-895-7421 DSN 760.* PWD

# Advance announcement for IMI in January 2003

Last January's Installation Management Institute (IMI) was such a success that the Assistant Chief of Staff for Installation Management (ACSIM) has decided to have it again. Once again, it will be held at the Wyndham Hotel in Orlando, Florida. The dates are 13-17 January 2003, which bumps up against the Martin Luther King Holiday.

It is not too early to start thinking about attending, and definitely not too early to start thinking about what topics you would like to see covered. Suggestions for topics and instructors can be forwarded Radonna Parrish (parrishr@bah.com) for consideration by the IMI planning committee. Please use the following format:

Presenter Name, Position, E-mail, Telephone
Presentation Title
Intended Audience
Brief Summary of Session Content
Proposed Length of Session

The deadline for submissions is 23 August 2002. If you have any questions, please call Radonna at 706-935-4925. Information regarding 2003 IMI registration will be forwarded at a later date.

*POC is Rik Wiant, CEMP-IP, 202-761-5788 DSN 763, e-mail: fredrick.w.wiant@usace.army.mil* PWD

# Garrison Commanders benefit from Pre-Command Course

*by Jerry Zekert*

Before arriving at an installation, Garrison Commanders should attend a three-week Pre-Command Course to get an overview of their roles and responsibilities regarding installation management. This course highlights most of the important issues that they will have to respond to when they arrive at their installations.

ACSIM's Greg Brewer and USACE's Jerry Zekert present a 1 ½ hour overview on Installation Master Planning and GIS implementation. As part of the presentation, they provide the Garrison Commanders with an information packet that gives them a quick snap shot of the installation, quick overview of the top planning initiatives and challenges facing the installation, and tells them who the installation planner is.

The course is well-received by the commanders, and they are obtaining a broad understanding of why planning is so critical to the long-term success of an installation.

DPWs, we need your help! As these sessions come up, you may be called upon to help in building an installation planning packet. This includes providing a short, one-page narrative on your top planning initiatives and challenges, minutes of the installation planning board and any other information you feel that would give a good holistic overview of the installation.

This is a great opportunity to give your next Garrison Commander a read ahead of the challenges he's going to face when he arrives at your installation. Invest some time in this activity, and you will find that this will help you tell your planning story.

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*Jerry Zekert is an engineer in the Real Property and Planning Branch of the Installation Support Division at Headquarters.* PWD

# FEMP offers energy training

The Federal Energy Management Program (FEMP) offers courses that teach how to achieve federal energy efficiency and water conservation at federal facilities as required by E.O. 13123. Most participants are on-site engineers and program managers, but federal financial and procurement specialists are also encourged to attend. Please check the FEMP web site for a complete listing and frequent updates: www.eren.doe.gov/femp.

The FEMP web site also provides a link to the FEMP Training Event Locator System (LOCATOR), for non-FEMP courses. LOCATOR is designed to help find training courses and conferences provided by universities, professional assoiations and private organizations.

In addition, FEMP sponsors symposia at National Conferences that offer excellent opportunites for federal energy and water management personnel to meet face-to-face, network and exchange information.

*For more information or to register, please call (703) 243-8343.* PWD

## Job Announcements made easy

There is now a U.S. Government-wide vacancy notification system at USAJOBS (<***http://profiler.usajobs.opm.gov/***>). It is easy to sign up and it works well.

## Call for Articles

The Nov/Dec 2002 issue of the Public Works Digest will feature our ***Annual Report***

We welcome articles from all organizations performing installation support work.

Please e-mail all articles to **alex.k.stakhiv@hq02.usace.army.mil** no later than October 18.

# John B. Nerger
# Department of the Army

John B. Nerger's name should have a familiar ring for many of you. As the Director of Facilities and Housing under the Assistant Chief of Staff for Installation Management (ACSIM), he is responsible for capital investment and infrastructure improvements on your installation.

"We aim to provide *quality* facilities for *quality* soldiers through our military construction and family housing programs and a variety of public works initiatives," explained Nerger. "Since facilities have a significant impact on readiness, morale and recruitment, we're working hard to rebuild and renovate our deteriorating infrastructure. Over the past 15 years, the Army had to mortgage installations to stay trained and ready to fight. Now the mortgage is past due, so one of our primary missions is to fight for and defend resources for facilities." Because there are never enough funds available, he says, "We also are using private sector capital to reduce energy usage and have begun to modernize military housing and utility systems through privatization."

Nerger was appointed to the Senior Executive Service in July 2000. Previously, he helped lead the Chief of Staff's Army Basing Study group and the ACSIM's Base Realignment and Closure Office. "These positions were good preparation for my work today," he said, "because we reshaped base structure from the Cold War era to meet future needs. As necessary as this work was, it's more enjoyable to take care of installations that are still open."

In prior assignments, Nerger honed his planning and programming skills with the Assistant Chief of Engineers and Chief of Staff's Program Analysis & Evaluation Directorate. "It was there I learned how resource decisions were made, invaluable experience in any Pentagon assignment," said Nerger.

Beginning his government career with the Department of the Navy in 1980, Nerger subsequently held several different assignments with the Army's Office of the Chief of Engineers. "I have a good understanding of how organizations operate to provide installation support, particularly the US Army Corps of Engineers. The Corps is a vital partner in our campaign to improve installations," he said. He also worked for the Joint Chiefs of Staff as chief of financial management, developing an in-depth knowledge of all the services.

Nerger graduated from Northwestern University in Evanston, Illinois, in 1978. He put in a year as a VISTA Volunteer working with attorneys in the Dubuque, Iowa, area to meet the needs of low-income clients. Then he attended graduate school at the University of Virginia, earning a master's degree in public administration. He pursued additional graduate education in national security studies at Georgetown University in Washington, DC and later attended the U.S. Army War College in 1994.

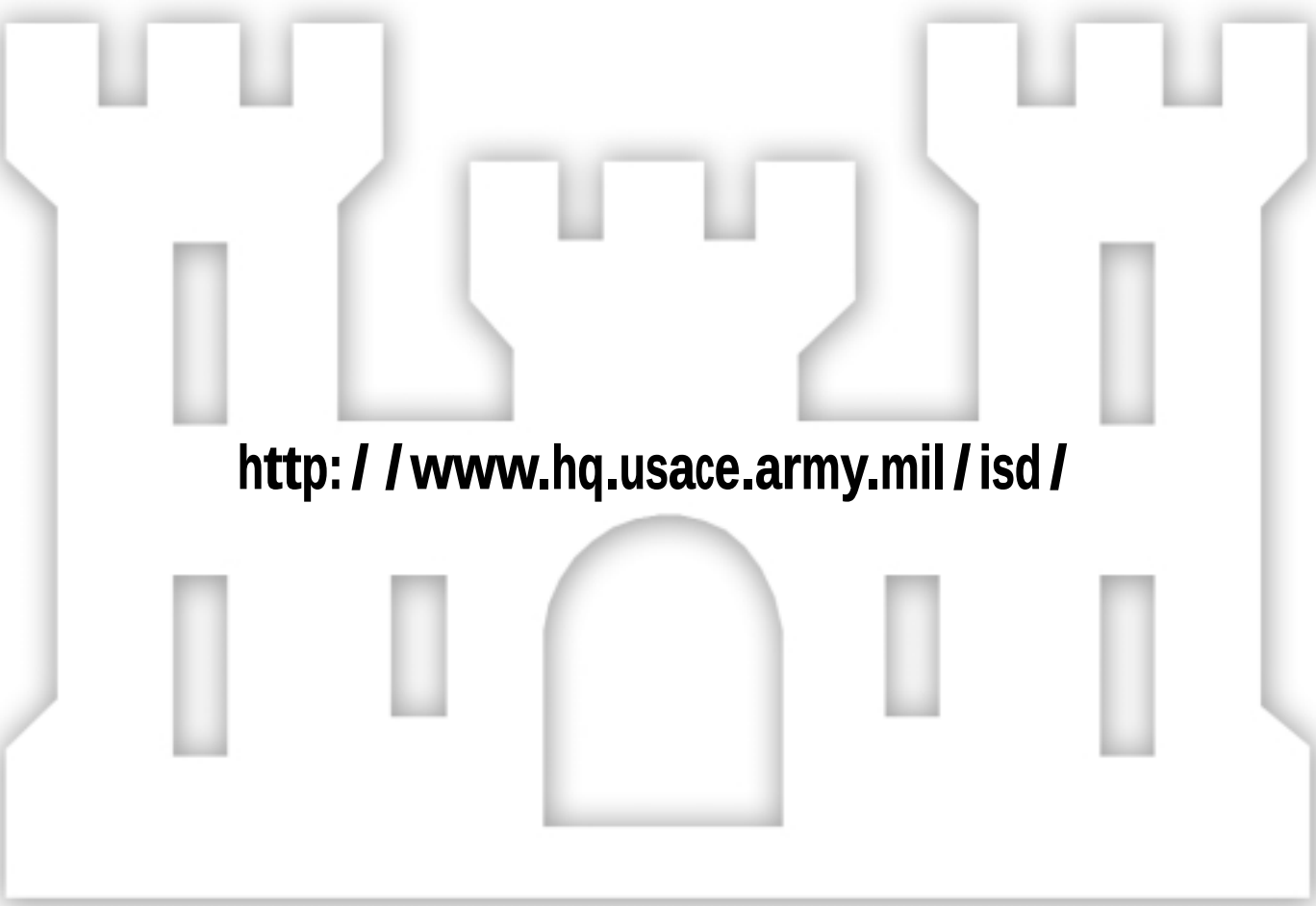
Nerger is optimistic about the impending changes in how installations will be managed. "After September 11, we gained a greater appreciation of how important our work is on behalf of the soldiers, family members and civilians who live and work on installations. As the Army moves to Transformation of Installation Management (TIM) this October, we'll be better able to serve soldiers who do so much to serve the rest of us."

On October 23, 2002, Nerger will receive the Federal Energy and Water Management Award for Exceptional Service. His dedicated support and commitment to The Army Facilities Energy Program has been critical in ensuring energy management and awareness. With his help, the Army has developed a strategic energy conservation plan that achieved over $17 million in energy savings and reduced 1,847 million BTUs of energy during FY01.

Other awards include the Decoration for Exceptional Civilian Service, Meritorious Civilian Service Award and Commander's Award for Civilian Service.

Nerger is a member of the Senior Executive Association, Association of the United States Army (AUSA), Professional Housing Management Association and the Federal Executive Institute Alumni Association.

Born in Chicago, Illinois, Nerger enjoys family activities, sports and running in his infrequent spare time. He is married and has two sons. PWD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